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ABSTRACT

The data presented in this report were collected in the 18th annual National Science Foundation (NSF)/National Institutes of Health (NIH) Survey of Graduate Students and Postdoctorates in Science and Engineering, covering 1989. The survey universe is composed of all institutions in the United States with departments or programs offering courses of study at the postbaccalaureate level in any science and engineering (S/E) field. Medical schools and other specialized institutions offering first-professional doctorates in health-related fields are also included. The 1989 survey universe included 334 doctorate-granting institutions and 275 master's-granting institutions. Section I presents descriptions of the survey methodology and response analysis; section II lists the institutions surveyed, by degree level, along with their identifying Federal Interagency Committee on Education (FICE) codes. Section III, subsection A, presents national totals for all institutions, both doctorate- and master's-granting for fall 1989 (academic year 1989/90). Subsection B contains trend data for all graduate institutions for the period 1981-89; subsection C contains trend statistics for doctorate-granting institutions only, and subsection D presents similar trend data for master's-granting institutions. Subsection E contains institutional listing and rankings of individual doctorate-granting institutions on the basis of fall 1989 data. Section IV displays copies of the survey instruments, along with summary questionnaire facsimiles containing data for all departments or for selected groups of departments. The facsimiles present data for all institutions, doctorate-granting institutions, master's-granting institutions, and other selected groups of institutions. (KR)

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project monitor: J. G. Huckenpöhler, Ph.D.

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summary

- In fall 1989, 441,000 graduate students were enrolled for advanced degrees in the science, engineering, and health fields in all institutions. This number is a 3-percent increase over the fall 1988 figure.

- The most rapid rise was in the health fields, 6 percent, followed by psychology and the social sciences with growth rates of over 4 percent. The small 1988 decrease in engineering enrollment was reversed, with graduate enrollment reaching nearly 105,000. The social sciences and psychology remained the largest science fields, with 17 percent and 10 percent of the total, respectively.

- The number of women enrolled in graduate S/E programs continued to rise more rapidly than men, reaching 38 percent of the total. Women continued to make up the majority of those enrolled in psychology, but accounted for only 13 percent of engineering graduate students.

- Graduate students enrolled full time reached 278,000, and accounted for 65 percent of the total. This represents a 3-percent growth since 1988, compared to less than 2 percent growth for those enrolled part time.

- Foreign students, at 23 percent of all those enrolled full time, increased at twice the rate of those with U.S. citizenship. Foreign students were most heavily concentrated in engineering, where they made up 47 percent of the total, and in the computer sciences and mathematics, with 44 percent and 43 percent of the total, respectively.

- Academic institutions remained the major source of support for a plurality of the full-time graduate students reported, 27 percent, followed by self, loans, and family, with 19 percent, and the Federal Government, at 13 percent. Of the Federal agencies for which separate support data were requested, only the Department of Defense provided primary support to fewer students in 1989 than in 1988.

- Master's-granting institutions accounted for one-eighth of all graduate students reported. Enrollment in these institutions grew by 7 percent from 1988 to 1989, compared to 2 percent growth in enrollment in doctorate-granting institutions.

acknowledgments

The fall 1989 Survey of Graduate Students and Postdoctorates in Science and Engineering was guided by J. G. Huckenpöhler, Science Resources Analyst, Division of Science Resources Studies, Science and Engineering Education and Human Resources Program (SEEHRP), National Science Foundation (NSF), under the direction of Mary Golladay, Program Director, SEEHRP. The National Institutes of Health (NIH) co-sponsored the survey.

The fall 1989 survey was conducted by Quantum Research Corporation (QRC) of Bethesda, Maryland, under NSF contract number SRS-88-00324. QRC staff members who worked on this project were:

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general notes

The data presented in this report were collected in the 18th annual National Science Foundation (NSF)/ National Institutes of Health (NIH) Survey of Graduate Students and Postdoctorates in Science and Engineering, covering 1989. The survey universe is composed of all institutions in the United States with departments or programs offering courses of study at the postbaccalaureate level in any science and engineering (S/E) field. Medical schools and other specialized institutions offering first-professional doctorates in health-related fields are also included. The 1989 survey universe included 334 doctorate-granting institutions and 275 master's-granting institutions.

Section I presents a description of the survey methodology and response analysis; section II lists the institutions surveyed, by degree level, along with their identifying Federal Interagency Committee on Education (FICE) codes.

Section III, subsection A, presents national totals for all institutions, both doctorate- and master's-granting, for fall 1989 (academic year 1989/90). Subsection B contains trend data for all graduate institutions for the period 1981-89; subsection C contains trend statistics for doctorate-granting institutions only, and subsection D presents similar trend data for master's-granting institutions. Subsection E contains institutional listings and rankings of individual doctorate-granting institutions on the basis of fall 1989 data.

Section IV displays copies of the survey instruments, along with summary questionnaire facsimiles containing data for all departments or for selected groups of departments. The facsimiles present data for all institutions, doctorate-granting institutions, master's-granting institutions, and otherr selected groups of institutions

Tables showing data for doctorate-granting institutions include all institutions with any component (medical school, dental school, etc.) or branch campus that granted S/E doctorates (including first-professional doctorates in health-related fields) for all years in which such degrees were offered. This definition differs from that used by the National Center for Education Statistics (NCES); NCES considers only those institutions that granted "significant numbers" of doctoral degrees as doctorate-granting.

data limitations

In any analysis of the data in this report, the following definitions and limitations should be kept in mind:

- In tables showing full-time graduate enrollment by source of support, "institutional support" includes those students receiving their primary support from State and local government sources as well as from their institutions.
- "Other U.S. sources" include students supported by industrial firms, nonprofit institutions (independent research institutes, professional societies, philanthropic foundations, etc.), and all other sources of support originating within the United States. Students supported primarily by foreign industrial firms, as well as by foreign governments, are reported under "foreign sources."

- "Imputation," as defined by NSF, denotes a computerized process by which estimates for totally or partially nonrespondent institutions are generated on the basis of their own data for earlier years, if available, or data from peer institutions. Data may be imputed for an entire institution, for a department, or for individual items or cells within items for which the institution or department was unable to provide actual data. The imputation procedures are described in detail in section I, Technical Notes.

- Respondent institutions may revise prior-year data as well as current data during the editing process. Consequently, only the trend data from the current report should be used in historical analyses.

data availability

Because of the large number of tables (over 650 in 1989) generated on the basis of graduate S/E enrollment data, it is not feasible to include the full set of tables in a general-audience publication such as this. To meet the needs of those interested in more detailed data of specific types, NSF has developed a series of "Specialized Pamphlets" focussing on various aspects of the data. There are at present 14 such pamphlets available; these are listed on the order blank provided at the back of this book for the convenience of those wishing to order one or more of these pamphlets.

Data published in this report are also available on diskettes and in machine-readable form on magnetic tapes. Single- or multi-year data tapes are available containing data for fall 1975 through fall 1989. Information on tape formats and the years for which they are available, together with prices and instructions for ordering, are contained in the current data user guide, Guide to the National Science Foundation's Surveys of Academic Science and Engineering. To obtain a copy of the guide, contact Dr. J. G. Huckenpöhler, who can also supply further information on the Survey of Graduate Students and Postdoctorates in Science and Engineering. His address and telephone number are:

Science and Engineering Education and Human Resources Program
Room L-611
National Science Foundation
1800 G Street, N.W.
Washington, D.C. 20550
(202) 634-6082

Selected data items for individual doctorate-granting institutions are available on computer-generated Institutional Profiles. These profiles cover data from this survey as well as data collected in NSF's other academic S/E surveys covering R&D expenditures and Federal support to academic institutions. Institutional Profiles for any institution or group of institutions may be ordered by FICE code (listed in section II) through Mr. Richard Bennof. He may be reached at the following address and telephone number:

Science and Engineering Activities Program
Room L-602
National Science Foundation
1800 G Street, N.W.
Washington, D.C. 20550
(202) 634-4252

Institutional planners can now obtain data from several academic S/E resources on CD-ROM compact disc. The compact disc contains the Computer Aided Science Policy Analysis and Research (CASPAR) database system, which is an easy-to-use tool for the retrieval and analysis of statistical data on academic science and engineering resources. CASPAR provides an extensive and growing data library with multi-year statistics on the state of higher education in general, and on academic S/E resources specifically. This data library is based on a set of standard institutional and field of science definitions across the multiple sources used to develop the database. The CASPAR program includes built-in help capabilities to facilitate the use and interpretation of the data.

CASPAR data are drawn from a number of sources. All data are available for individual institutions, by State, and at the national level. Longitudinal data from surveys of universities and colleges conducted by the NSF Division of Science Resources Studies include the R&D Expenditures Survey and the Federal Support Survey in addition to the Graduate Student Survey. Data from the surveys of universities and colleges conducted by NCES include Earned Degrees, Opening Fall Enrollment, Faculty Salaries, Tenure and Fringe Benefits, and Financial Statistics. Data from other sources include the National Research Council Dooctorate Program Ratings. For additional information on CASPAR, contact:

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Bethesda, MD 20814

section i.

technical notes

the survey universe

The data published in this report for the fall 1989 Survey of Graduate Students and Postdoctorates in Science and Engineering (GSESP) represent national estimates of graduate enrollment and postdoctorate employment at the beginning of academic year 1989/90 in all academic institutions in the United States that granted doctorate or master's degrees in any science or engineering (S/E) field. Included are data for all branch campuses, affiliated research centers, and separately organized components such as medical or dental schools, schools of nursing, public health, etc. The survey universe consisted of 728 reporting units at 609 graduate institutions. Included were 453 reporting units associated with 334 doctorate-granting institutions, and 275 master's-granting institutions.

The National Science Foundation (NSF) has collected data on graduate S/E enrollment and postdoctorates since 1966. From fall 1966 through fall 1971, data were collected from a limited number of doctorate-granting institutions through the NSF Graduate Traineeship Program, which requested data only on those S/E fields supported by NSF. Beginning with the fall 1972 survey, this data collection effort was assigned to the Universities and Nonprofit Institutions Studies Group and was gradually expanded during the period 1972-75 to include additional S/E fields as well as all institutions known to have programs leading to the master's or doctorate degree. Because of this expansion of coverage, data for 1974 and earlier years are not strictly comparable with 1975 and later data. Table I-1 shows the number of institutions, reporting units, and departments at each level included in the data, as well as the total enrollment reported for each year between 1966 and 1989. No attempt has been made to inflate the data for 1966-74 to reflect universe totals.

Beginning with the 1984/85 academic year, master's-granting institutions were surveyed on a sample basis. The fall 1988 survey included the entire survey population for the first time since 1983/84. Four institutions participated in the survey for the first time this year. (See Survey Methodology, p. 5.)

Tables I-2 and I-3 present data on departmental coverage by S/E field for each year covered by the trend data shown in section III, subsections B and C.

the survey instruments

The Departmental or Program Data Sheet (NSF form 812) on which data were reported in fall 1989 was identical to the fall 1988 version, except for changes in the instructions to clarify some data items. Each survey package also included (1) a flier explaining NSF's academic S/E surveys; (2) a List of Departments or Programs (NSF form 811) generated individually by computer for each institution surveyed, based on the departments known to exist in the previous survey cycle; (3) a "Crosswalk" showing the NCES instructional program codes corresponding to each S/E field as defined by NSF; (4) a flow chart for use by those institutions using computerized records to compile their submissions; and

Table I-1. The NSF data collection series: 1966-89

Series and year	Number of institutions surveyed	Number of reporting units	Number of departments			Graduate enrollment in surveyed fields		
			Total	Master's	Doctorate	Total	Full-time	Part-time
A. Graduate Traineeship Program								
1966	204	204	2,866	441	2,425	169,303	124,255	45,048
1967	209	209	3,014	434	2,580	179,622	133,972	45,650
1968	219	219	3,190	454	2,736	184,759	140,714	44,045
1969	224	224	3,354	460	2,894	196,341	147,515	48,826
1970	227	227	3,544	473	3,071	201,918	153,250	48,668
1971	224	249	3,397	407	2,990	214,680	164,764	49,916
B. Survey of Graduate Science and Engineering Students and Postdoctorates 1/								
Doctorate institutions								
1972 2/	260	328	4,593	780	3,813	210,895	161,329	49,566
1973	254	336	6,543	862	5,681	214,787	161,858	52,929
1974	279	369	7,496	1,409	6,087	260,970	191,246	69,724
1975	303	400	7,802	1,622	6,180	291,947	206,797	85,150
1976	311	409	7,892	1,671	6,221	295,526	210,117	85,409
1977	313	416	8,112	1,794	6,318	303,448	212,576	90,872
1978	311	420	8,150	1,759	6,391	299,971	209,380	90,591
1979	329	447	8,353	1,863	6,490	312,816	216,801	96,015
1980	328	446	8,458	1,913	6,545	322,846	223,012	99,834
1981	328	444	8,397	1,916	6,481	329,702	226,921	102,781
1982	327	444	8,250	1,899	6,351	336,221	229,993	106,228
1983	327	443	8,139	1,877	6,262	343,071	236,676	106,995
1984	324	444	8,175	1,880	6,295	346,431	237,460	108,971
1985	324	440	8,292	1,915	6,377	356,022	241,605	114,417
1986	324	441	8,366	1,930	6,436	367,163	250,470	116,693
1987	329	448	8,495	1,942	6,553	372,461	254,865	117,596
1988	334	454	8,707	1,993	6,714	377,674	259,848	117,826
1989	334	453	8,839	2,014	6,825	385,025	267,554	117,471
Master's institutions								
1975 3/	283	283	1,224	1,224	N/A	37,711	13,692	24,019
1976	285	285	1,242	1,242	N/A	39,234	13,998	25,236
1977	289	289	1,211	1,211	N/A	43,608	15,286	28,322
1978 4/	2	2	18	18	N/A	45,216	15,692	29,524
1979	301	301	1,374	1,374	N/A	47,178	16,288	30,890
1980	299	299	1,388	1,388	N/A	47,047	16,843	30,204
1981	295	295	1,387	1,387	N/A	48,402	16,750	31,652
1982	283	283	1,387	1,387	N/A	48,835	16,225	32,610
1983	283	283	1,388	1,388	N/A	50,977	17,659	33,318
1984 5/	88	88	669	669	N/A	51,747	18,137	33,610
1985 5/	88	88	686	686	N/A	51,920	17,862	34,058
1986 5/	88	88	689	689	N/A	52,175	17,934	34,241
1987 5/	88	88	697	697	N/A	52,897	18,569	34,328
1988	277	277	1,424	1,424	N/A	52,157	18,319	33,838
1989	275	275	1,479	1,479	N/A	55,958	19,065	36,893

1/ The name of the survey was changed in 1981 to specify the inclusion of engineering.

2/ The 1972 survey of doctorate-granting institutions included selected data items for 1971.

3/ The 1976 survey of master's-granting institutions included selected data items for 1975.

4/ The 1978 survey did not include master's institutions. Two institutions were subsequently changed from doctorate- to master's-granting. Totals represent estimates based on 1977 and 1979 data.

5/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987.

NOTE: N/A = not applicable.

SOURCE: National Science Foundation, SRS

Table I-2. Science/engineering departmental population at doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	8,397	8,250	8,139	8,175	8,292	8,366	8,495	8,707	8,839
Total, science/engineering fields	5,857	5,881	5,871	5,880	5,961	6,003	6,114	6,293	6,378
Engineering, total	1,041	1,056	1,059	1,069	1,109	1,120	1,165	1,193	1,202
Aerospace	35	35	35	35	36	36	38	41	41
Agricultural	38	38	38	40	42	41	40	40	40
Biomedical	39	39	38	42	42	41	46	49	50
Chemical	120	123	125	127	127	127	129	130	133
Civil	165	168	171	170	177	182	185	188	184
Electrical	153	156	158	159	167	167	179	183	188
Engineering science	35	35	32	32	34	35	35	36	35
Industrial	94	97	96	99	105	106	114	121	127
Mechanical	153	154	156	157	166	169	175	177	173
Metallurgical/materials	68	68	69	69	72	72	73	74	79
Mining	22	23	25	25	26	25	29	29	27
Nuclear	30	30	29	29	29	28	27	27	27
Petroleum	14	15	15	16	16	16	19	19	19
Engineering, n.e.c.	75	75	72	69	70	75	76	79	79
Sciences, total	4,816	4,825	4,812	4,811	4,852	4,883	4,949	5,100	5,176
Physical sciences	524	521	521	521	521	528	527	531	536
Astronomy	32	32	32	32	33	33	33	33	33
Chemistry	252	250	250	250	249	250	250	252	255
Physics	234	234	233	229	228	230	228	232	235
Physical sciences, n.e.c.	6	5	6	10	11	15	16	14	13
Earth, atmospheric, and ocean sciences	286	288	286	283	290	291	295	301	305
Atmospheric sciences	28	28	27	27	27	27	28	28	28
Geosciences	183	187	187	186	188	189	187	191	192
Oceanography	34	34	33	33	36	36	37	37	41
Earth, atm. & oc. sci., n.e.c.	41	39	39	37	39	39	43	45	44
Mathematical sciences	332	335	333	333	331	335	340	346	350
Computer sciences	128	138	146	153	181	193	209	215	217
Agricultural sciences	271	275	275	274	274	274	272	275	279
Biological sciences	1,771	1,762	1,756	1,756	1,765	1,771	1,801	1,825	1,835
Anatomy	118	121	121	118	116	113	115	115	117
Biochemistry	184	182	183	182	186	188	189	191	194
Biology	215	213	213	214	210	213	216	220	222
Biometry/epidemiology	41	39	40	41	44	47	47	48	49
Biophysics	36	33	29	30	27	30	31	31	32
Botany	108	110	108	110	110	109	110	112	111
Cell biology	50	54	57	60	64	73	83	88	89
Ecology	23	23	23	23	23	22	22	23	26
Entomology/parasitology	48	47	46	46	49	48	47	48	47
Genetics	60	60	59	60	60	60	61	64	65
Microbiology	232	226	228	229	233	229	232	234	233
Nutrition	94	95	94	91	92	93	98	98	98
Pathology	153	149	148	148	146	146	149	147	145
Pharmacology	177	176	174	171	169	165	165	167	166
Physiology	143	146	144	143	143	143	146	146	149
Zoology	57	58	56	53	56	57	55	54	52
Biosciences, n.e.c.	32	30	33	37	37	35	35	39	40
Psychology	334	335	336	338	340	341	348	420	443
Social sciences	1,170	1,171	1,159	1,153	1,150	1,150	1,157	1,187	1,211
Agricultural economics	48	49	50	51	52	52	51	51	52
Anthropology	113	114	112	113	115	113	115	116	117
Economics (except agricultural)	196	192	187	187	186	189	191	194	195
Geography	99	98	98	96	97	96	96	95	93
History and philosophy of science	27	26	26	26	23	22	24	24	24
Linguistics	64	63	63	61	63	61	65	68	69
Political science	285	286	285	284	282	280	280	295	303
Sociology	170	170	169	164	164	161	163	162	168
Sociology/anthropology	33	34	33	34	33	34	33	33	32
Social sciences, n.e.c.	135	139	136	137	136	142	139	149	158
Total, health fields	2,540	2,369	2,268	2,295	2,331	2,363	2,381	2,414	2,461
Anesthesiology	94	87	81	82	82	81	80	79	82
Cancer/oncology	27	25	25	26	29	32	31	31	35
Cardiology	89	81	70	69	69	69	68	67	67
Dentistry	85	81	81	82	84	82	83	83	85
Endocrinology	84	77	71	70	69	70	69	71	72
Gastroenterology	80	74	67	66	65	65	64	64	64
Hematology	83	78	71	70	70	71	71	70	68
Neurology	113	104	104	107	108	112	113	118	121
Nursing	100	101	101	101	103	110	112	115	116
Obstetrics/gynecology	101	93	86	87	89	89	90	91	91
Ophthalmology	94	84	77	78	78	77	76	76	77
Otorhinolaryngology	85	75	67	68	67	67	67	68	68
Pediatrics	106	104	101	101	100	101	105	106	105
Pharmaceutical sciences	82	81	78	79	79	80	81	78	81
Preventive medicine/community health	157	148	141	141	151	153	154	156	156
Psychiatry	104	96	92	93	92	92	94	92	98
Pulmonary disease	75	69	65	64	63	64	63	62	63
Radiology	130	117	110	113	114	113	116	119	120
Speech pathology/audiology	122	122	121	122	126	125	124	124	125
Surgery	235	215	208	213	213	214	213	216	216
Veterinary sciences	35	33	33	34	33	34	35	36	37
Clinical medicine, n.e.c.	312	286	277	287	299	307	309	315	319
Health related, n.e.c.	147	138	141	142	148	155	163	177	195

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table I-3. Science/engineering departmental population at master's-granting institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	1,387	1,387	1,388	669	686	689	697	1,424	1,479
Total, science/engineering fields	1,254	1,243	1,244	594	608	611	618	1,258	1,307
Engineering, total	144	149	152	97	103	105	109	171	187
Aerospace	1	1	2	3	3	3	3	3	3
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	3	3	3	2	2	2	2	3	3
Chemical	7	7	7	4	4	4	4	7	7
Civil	25	25	25	15	15	16	17	30	32
Electrical	26	30	30	18	18	19	19	36	43
Engineering science	6	6	5	4	4	4	4	3	2
Industrial	25	26	26	14	15	15	17	27	32
Mechanical	16	16	18	14	15	17	16	25	26
Metallurgical/materials	5	5	5	4	5	5	5	5	7
Mining	3	3	3	3	4	4	4	4	4
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	1	1	1	1	2	2	2	2	2
Engineering, n.e.c.	26	26	27	15	16	14	16	26	26
Sciences, total	1,110	1,094	1,092	497	505	506	509	1,087	1,120
Physical sciences	153	152	144	69	69	72	71	139	138
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	95	94	91	44	44	45	44	88	89
Physics	49	48	43	19	19	19	19	40	36
Physical sciences, n.e.c.	9	10	10	6	6	8	8	11	13
Earth, atmospheric, and ocean sciences	53	54	52	26	26	26	27	56	56
Atmospheric sciences	1	1	1	1	1	1	1	1	1
Geosciences	28	28	28	11	11	12	13	34	33
Oceanography	3	3	4	3	3	3	4	5	6
Earth, atm. & oc. sci., n.e.c.	21	22	19	11	11	10	9	16	16
Mathematical sciences	122	119	118	44	44	43	43	111	115
Computer sciences	37	37	45	28	32	35	35	76	81
Agricultural sciences	23	22	23	10	10	10	12	29	31
Biological sciences	205	203	205	92	94	90	90	192	196
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	2	2	2	2	2	2	3	2	2
Biology	158	155	153	53	54	53	51	147	149
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	5	5	6	6	6	5	5	4	4
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	2	2	3	3	3	3	3	3	3
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	1	1	1	1	1	1	1	1	1
Microbiology	7	6	5	5	5	5	5	4	4
Nutrition	11	12	13	7	8	8	8	14	14
Pathology	2	2	2	2	2	2	2	2	2
Pharmacology	1	1	1	1	1	1	1	1	1
Physiology	0	0	0	0	0	0	0	0	0
Zoology	5	5	7	5	5	3	4	3	3
Biosciences, n.e.c.	11	12	12	7	7	7	7	11	13
Psychology	181	185	190	66	66	69	70	198	212
Social sciences	336	322	315	162	164	161	161	286	291
Agricultural economics	3	3	3	3	3	3	2	2	2
Anthropology	12	11	13	12	12	11	11	11	11
Economics (except agricultural)	42	41	38	24	23	23	22	35	37
Geography	25	25	25	15	16	15	15	22	22
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	4	4	4	4	5	5	5	7	7
Political science	128	120	117	50	50	51	51	110	112
Sociology	48	44	43	21	22	23	23	43	43
Sociology/anthropology	6	6	6	5	5	4	4	5	4
Social sciences, n.e.c.	68	68	66	28	28	26	28	51	53
Total, health fields	133	144	144	75	78	78	79	166	172
Anesthesiology	0	0	0	0	0	0	0	0	0
Cancer/oncology	0	0	0	0	0	0	0	0	0
Cardiology	1	1	1	1	1	1	1	0	0
Dentistry	0	0	0	0	0	0	0	0	0
Endocrinology	0	0	0	0	0	0	0	0	0
Gastroenterology	0	0	0	0	0	0	0	0	0
Hematology	0	0	0	0	0	0	0	0	0
Neurology	1	1	1	1	1	1	1	1	1
Nursing	22	25	25	14	16	17	17	46	50
Obstetrics/gynecology	0	0	0	0	0	0	0	0	0
Ophthalmology	0	0	0	0	0	0	0	0	0
Otorhinolaryngology	0	0	0	0	0	0	0	0	0
Pediatrics	0	0	0	0	0	0	0	0	0
Pharmaceutical sciences	3	3	3	3	3	3	3	3	3
Preventive medicine/community health	3	5	6	4	4	4	4	5	5
Psychiatry	0	0	0	0	0	0	0	0	0
Pulmonary disease	0	0	0	0	0	0	0	0	0
Radiology	0	0	0	0	0	0	0	0	0
Speech pathology/audiology	53	53	52	22	23	22	22	51	53
Surgery	0	0	0	0	0	0	0	0	0
Veterinary sciences	1	1	1	1	1	1	1	1	1
Clinical medicine, n.e.c.	8	9	8	5	5	5	5	5	5
Health related, n.e.c.	41	46	47	24	24	24	25	54	54

1/ Number of departments in sampled institutions.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

(5) a postcard for the institutions to indicate changes in coordinator name, address, or telephone number.

survey methodology

The survey packages were mailed out by October 31, 1989. The final survey universe consisted of 728 responding units at 609 institutions.

The acknowledgment postcard requested information from institutional coordinators on the sources of the data reported, whether maintained at a central location or collected from the individual departments and whether derived from a computerized data base or hand-tabulated. Of the 728 responding units surveyed, coordinators at 620 units, or 85 percent, provided this information. The responding coordinators indicated the following distribution of data sources:

Schools reporting data sources	620	100.0%
Computerized central records	52	8.3
Automated with departmental input	5	0.8
Hand-tabulated at institution level	56	9.0
Hand-tabulated at department level	179	28.9
Combination of sources	328	52.9

This pattern is similar to that for 1988. This year the proportion using computerized systems to assemble the requested data increased, while those hand-tabulating the data at the departmental level or using a combination of data sources declined proportionately.

Institutional coordinators were asked to review the departmental listing provided on the form 811 and to indicate any changes in their departmental structure such as new departments formed, old departments phased out, splits, and mergers, and to check off any departments that had neither graduate students nor postdoctorates and for which form 812s would therefore not be submitted. The revised form 811s were returned to the data processing contractor for use as a checklist in tracking departmental responses.

A form 812 was completed for each department, either centrally or at the departmental level, and returned to the data processing contractor for data entry, editing, and tabulation. Arithmetic errors, inconsistencies between items, and sharp year-to-year fluctuations were referred to the institutional coordinators for correction or clarification.

the response rate

Of the 728 responding entities included in the fall 1989 survey, 708, or 97.3 percent, were able to provide at least partial data, distributed as follows:

Highest degree granted	Number surveyed	Number responding	Percent responding
Total	728	708	97.3
Doctorate	453	447	98.7
Master's	275	261	94.9

At the departmental level, 9,800 departments, or 95 percent of the 10,318 departments surveyed, responded. This total includes 8,908 departments, or 86.3 percent of the total, providing complete responses and 891 departments, or 8.6 percent, for which partial imputation was necessary. This response rate has been improving gradually over the past 8 years.

Missing data for partially nonrespondent departments were imputed using the departments' prior-year data, where available, or data from peer institutions in cases where no prior data had been reported. Data for nonrespondent departments were imputed using prior years' data where available. For five nonrespondent departments that were new to the survey, data were not imputable. The number of departments in doctorate- and master's-granting institutions which required total or partial imputation and the numbers and proportions of full- and part-time graduate students and postdoctorates imputed are shown in tables I-5 through I-8. As in earlier years, imputation rates for master's-granting institutions were slightly higher than those for doctorate-granting institutions.

changes in data items

Although NSF has attempted to maintain consistent trend data, some modifications in the survey questionnaire have been made to respond to changing issues over the past 15 years. As a result, some data items are not available for all institutions in all years.

Whenever a new item has been added to the questionnaire, it has been standard policy on the part of NSF to allow the respondents one year's lead time to convert their data collection systems before incorporating the new data into the survey; the question is labeled "optional" in the first year. Thus while information on racial/ethnic background was first added to the survey form in 1979, publishable data were first obtained in 1980. Major changes in the data collected are as follows:

- From 1975 through 1977, data for master's-granting institutions were collected on a short form that did not collect data on sex or citizenship of graduate students, nor any data on postdoctorates. In 1978, a similar questionnaire was sent to doctorate-granting institutions, and master's-granting institutions were not surveyed. The 1978 figures shown in the tables for master's-granting institutions represent estimates based on 1977 and 1979 data. Beginning in 1979, the long form was sent to both doctorate- and master's-granting institutions.

- Distribution by sex was originally requested only for full-time graduate students at doctorate-granting institutions. Beginning in 1976, master's-granting institutions were requested to provide data on all graduate students by sex, and in 1977 similar data were requested for all graduate students in all institutions. The short form used in the 1978 survey did not request any information on sex; figures in the tables represent estimates based on 1977 and 1979 data.

- Citizenship data were collected only for graduate students enrolled full time in doctorate-granting institutions through 1977. No citizenship data were requested on the short form used for master's-granting institutions in 1975 through 1977 and for doctorate-granting institutions in 1978. Data on citizenship of all full-time graduate students are available beginning in 1979 and on those enrolled part-time since 1983.

Table I-4. Departmental response rates: 1975-89

Year	Total	Complete response	Percent	Partial response	Percent	Complete non-response	Percent
1975	9,162	8,998	98.2	NA	NA	NA	NA
1976	9,275	9,148	98.6	NA	NA	NA	NA
1977	9,513	9,432	99.1	NA	NA	NA	NA
1978	8,242	8,077	98.0	NA	NA	NA	NA
1979	9,796	9,446	96.4	NA	NA	NA	NA
1980	9,930	9,593	96.6	NA	NA	NA	NA
1981	9,917	8,594	86.7	613	6.2	710	7.2
1982	9,776	8,104	82.9	744	7.6	928	9.5
1983	9,663	8,070	83.5	816	8.4	777	8.0
1984	8,748	7,490	85.6	643	7.4	615	7.0
1985	9,025	7,818	86.6	672	7.4	535	5.9
1986	9,097	7,817	85.9	779	8.6	501	5.5
1987	9,254	8,030	86.8	715	7.7	509	5.5
1988	10,295	8,812	85.6	970	9.4	513	5.0
1989	10,318	8,908	86.3	891	8.6	519	5.0

NOTE: NA = not availible. Departments providing partial responses were tabulated separately from complete nonrespondents beginning in 1981.

SOURCE: National Science Foundation, SRS

Table I-5. Imputation for nonresponse at doctorate-granting institutions by area of science/engineering and enrollment status: 1989

Area of science/engineering	Number of graduate departments		Total in survey			Number imputed			Imputation rate (percent)		
	In universe	Totally imputed	Full time	Part time	Postdoctorates	Full time	Part time	Postdoctorates	Full time	Part time	Postdoctorates
Total, all areas	8,839	426	267,554	117,471	28,157	13,023	7,968	1,300	4.9	6.8	4.6
Engineering	1,202	65	62,379	34,619	1,879	3,043	2,193	155	4.9	6.3	8.2
Physical sciences	536	23	28,396	3,348	5,332	950	214	164	3.3	6.4	3.1
Earth, atmospheric, and ocean sciences	305	22	9,665	2,976	486	830	166	59	8.6	5.6	12.1
Mathematical sciences	350	13	13,111	3,885	223	462	135	12	3.5	3.5	5.4
Computer sciences	217	14	14,088	12,500	78	993	1,116	6	7.0	8.9	7.7
Agricultural sciences	279	11	8,568	1,799	483	77	20	0	0.9	1.1	0.0
Biological sciences	1,835	74	39,461	6,327	11,830	1,744	454	508	4.4	7.2	4.3
Psychology	443	29	24,727	8,774	538	1,502	392	34	6.1	4.5	6.3
Social sciences	1,211	86	42,809	21,427	381	2,027	2,000	3	4.7	9.3	0.8
Health fields	2,461	89	24,350	21,816	6,927	1,395	1,278	359	5.7	5.9	5.2

SOURCE: National Science Foundation, SRS

Table I-6. Imputation rates for all departments at doctorate-granting institutions: Fall 1989

Number of departments: 1000

5. FULL-TIME GRADUATE S/E STUDENTS	Students Receiving Financial Assistance									Self support (includ. loans & family sources) (J)	Total for all sources (sum of columns A - J) (K)
	Federal Sources (excluding loans)						Non-Federal Sources				
		HHS									
	DOD (A)	NIH (B)	Other HHS (C)	NSF (D)	Dept. of Agr. (E)	Other Federal sources (F)	Institutional support (G)	Foreign sources (H)	Other U.S. sources (I)		
Graduate Fellowships (1)	5.4	6.6	9.2	5.6	17.6	6.6	8.1	12.4	6.7		8.0
Graduate Traineeships (2)	9.3	7.2	6.1	2.2	15.6	4.7	10.6	31.9	9.9		8.5
Graduate Research Assistants (3)	7.9	6.0	4.9	8.3	2.0	7.5	6.7	6.6	7.3		6.9
Graduate Teaching Assistants (4)		0.7	0.0	11.1	0.0	6.8	9.0		23.5		9.1
Other Types of Support (5)	3.4	12.9	1.0	4.3	16.9	14.8	13.4	12.6	11.1	12.5	12.3
FULL-TIME TOTAL (6)	6.4	6.5	5.9	7.8	3.3	7.7	8.8	12.7	8.3	12.5	4.9
Full-time Women (7)	19.7	8.8	5.8	7.7	4.9	9.6	10.6	9.4	7.5	12.4	6.2
Full-time First-year Total (8)											7.7
Full-time First-year Women (9)											7.1

6. PART-TIME GRADUATE S/E STUDENTS	
Total (1)	7.1
Women (2)	9.2

7. RACIAL/ETHNIC BACKGROUND OF GRADUATE S/E STUDENTS	U.S. Citizens Only						Foreign (G)	Total (sum of columns A - G) (H)
	Black non-Hispanic (A)	American Indian/ Alaskan (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other or unknown (F)		
Full-time (1)	9.1	3.3	10.1	9.5	7.4	21.2	8.7	4.9
Part-time (2)	14.5	14.4	20.3	11.5	11.8	35.2	13.8	7.1

8. S/E POSTDOCTORATES AND NON-FACULTY DOCTORAL RESEARCH STAFF	Postdoctorates							
	Source of Support				Total for all sources (A - D) (E)	Foreign postdoctorates (F)		Other non-fac. doctoral research staff (G)
	Federal			Non-Federal (D)				
	Fellowships (A)	Traineeships (B)	Research grants (C)					
Total (1)	11.4	11.3	9.4	11.2	8.4	8.7		6.5
Women (2)	9.6	10.2	8.4	11.0	8.7	14.8		7.8
With MD, DDS, or DVM degrees (3)	7.8	9.9	7.8	8.2	8.1	7.7		3.5

SOURCE: National Science Foundation, SRS

Table I-7. Imputation for nonresponse at master's-granting institutions by area of science/engineering and enrollment status: 1989

Area of science/engineering	Number of graduate departments		Total in survey			Number imputed			Imputation rate (percent)		
	In universe	Totally imputed	Full time	Part time	Postdoctorates	Full time	Part time	Postdoctorates	Full time	Part time	Postdoctorates
Total, all areas	1,479	93	19,065	36,893	55	1,664	1,906	8	8.7	5.2	14.5
Engineering	187	18	2,201	5,723	7	271	329	3	12.3	5.7	42.9
Physical sciences	138	11	768	1,072	11	32	40	0	4.2	3.7	0.0
Earth, atmospheric, and ocean sciences	56	5	423	748	3	24	41	0	5.7	5.5	0.0
Mathematical sciences	115	4	681	1,796	2	13	142	0	1.9	7.9	0.0
Computer sciences	81	4	1,938	4,388	6	244	190	0	12.6	4.3	0.0
Agricultural sciences	31	4	377	295	0	47	22	0	12.5	7.5	-
Biological sciences	196	12	1,551	2,323	25	151	67	5	9.7	2.9	20.0
Psychology	212	14	5,494	7,253	1	607	256	0	11.0	3.5	0.0
Social sciences	291	15	2,938	7,779	0	95	641	0	3.2	8.2	-
Health fields	172	6	2,694	5,516	0	180	178	0	6.7	3.2	-

SOURCE: National Science Foundation, SRS

Table I-8. Imputation rates for all departments at master's-granting institutions: Fall 1989

Number of departments: 373

5. FULL-TIME GRADUATE S/E STUDENTS	Students Receiving Financial Assistance									Self support (includ. loans & family sources) (J)	Total for all sources (sum of columns A - J) (K)
	Federal Sources (excluding loans)						Non-Federal Sources				
		HHS									
	DOD (A)	NIH (B)	Other HHS (C)	NSF (D)	Dept. of Agr. (E)	Other Federal sources (F)	Institutional support (G)	Foreign sources (H)	Other U.S. sources (I)		
Graduate Fellowships (1)	75.0	0.0	7.1	12.5	0.0	32.8	15.1	22.0	14.0		18.7
Graduate Traineeships (2)	0.0	50.0	5.8	0.0	0.0	5.9	7.5	0.0	0.0		7.4
Graduate Research Assistants (3)	31.0	16.7	0.0	2.0	17.4	17.5	9.8	0.0	13.9		11.7
Graduate Teaching Assistants (4)		0.0	0.0	60.0	0.0	20.0	19.1		34.0		19.5
Other Types of Support (5)	16.7	0.0	0.0	0.0	50.0	76.9	12.9	28.9	13.6	26.5	26.5
FULL-TIME TOTAL (6)	30.0	19.4	5.8	7.6	17.6	44.1	15.1	25.2	15.7	26.5	9.5
Full-time Women (7)	7.7	12.5	4.8	0.0	9.1	19.4	13.4	9.1	7.8	23.0	12.1
Full-time First-year Total (8)											17.3
Full-time First-year Women (9)											14.3

6. PART-TIME GRADUATE S/E STUDENTS	
Total (1)	5.2
Women (2)	9.5

7. RACIAL/ETHNIC BACKGROUND OF GRADUATE S/E STUDENTS	U.S. Citizens Only						Foreign (G)	Total (sum of columns A - G) (H)
	Black non-Hispanic (A)	American Indian/ Alaskan (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other or unknown (F)		
Full-time (1)	17.1	1.7	12.2	14.0	21.2	36.5	24.3	9.5
Part-time (2)	22.1	4.8	22.8	22.8	20.6	28.8	20.7	5.2

8. S/E POSTDOCTORATES AND NON-FACULTY DOCTORAL RESEARCH STAFF	Postdoctorates						Other non-fac. doctoral research staff (G)
	Source of Support				Total for all sources (A - D) (E)	Foreign postdoctorates (F)	
	Federal			Non-Federal (D)			
	Fellowships (A)	Traineeships (B)	Research grants (C)				
Total (1)	50.0	0.0	17.9	8.0	14.5	8.3	0.0
Women (2)	0.0	0.0	16.7	0.0	12.5	20.0	0.0
With MD, DDS, or DVM degrees (3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SOURCE: National Science Foundation, SRS

- As noted above, racial/ethnic data were first requested in 1979 and became a standard item on the questionnaire in 1980. But imputation rates for this item are still higher than for other data on the questionnaire, as shown in tables I-6 and I-8.
- "Fellowships and traineeships" were combined on one line until 1979, when separate data on the two mechanisms were first collected.
- "Other nonfaculty research personnel" were combined with postdoctorates until 1979.
- Separate data on students receiving their primary support from the U.S. Department of Agriculture were first requested in 1985.

data revisions

During the fall 1988 survey cycle, the criteria for inclusion of departments in the survey universe were tightened, and a review of the departments surveyed was begun. Those departments not primarily oriented toward the granting of research degrees were no longer considered to fall within the definition of science and engineering. As a result of this review, it was determined that a number of departments, primarily in the "Social sciences, n. e. c." field, were primarily engaged in training teachers or practitioners rather than researchers; these departments were deleted from the data base. This process was continued during the fall 1989 survey cycle, and expanded to ensure trend consistency for the entire 1975-89 period. As a result, total enrollments and social science enrollments for all years were reduced. The net effect of adjustments over the years is shown in table I-9.

Table 1-9. Comparison of graduate enrollment data as originally published and as modified through the fall of 1989 graduate student survey cycle: 1975-89

Year	Total, all institutions			Doctorate-granting institutions			Master's-granting institutions		
	Original total	Revised total	Percent change	Original total	Revised total	Percent change	Original total	Revised total	Percent change
	Total graduate enrollment in surveyed fields								
1975 1/ .	336,843	331,658	-1.5	290,662	291,947	0.4	46,181	39,711	-14.0
1976	345,979	334,760	-3.2	297,280	295,526	-0.6	48,699	39,234	-19.4
1977	362,978	347,056	-4.4	306,710	303,448	-1.1	56,268	43,608	-22.5
1978 2/ .	NA	345,187	NA	311,982	299,971	-3.8	NA	45,216	NA
1979	375,267	359,994	-4.1	321,770	312,816	-2.8	53,497	47,178	-11.8
1980	383,210	369,893	-3.5	333,658	322,846	-3.2	49,552	47,047	-5.1
1981	392,034	378,104	-3.6	340,203	329,702	-3.1	51,831	48,402	-6.6
1982	399,682	385,056	-3.7	347,414	336,221	-3.2	52,268	48,835	-6.6
1983	413,564	394,048	-4.7	358,276	343,071	-4.2	55,288	50,977	-7.8
1984 3/ .	415,064	398,178	-4.1	363,470	346,431	-4.7	51,594	51,747	0.3
1985 3/ .	434,836	407,942	-6.2	371,052	356,022	-4.1	63,784	51,920	-18.6
1986 3/ .	446,102	419,338	-6.0	384,203	367,163	-4.4	61,899	52,175	-15.7
1987 3/ .	449,585	425,358	-5.4	388,681	372,461	-4.2	60,904	52,897	-13.1
1988	445,595	429,831	-3.5	391,683	377,674	-3.6	53,912	52,157	-3.3
1989	440,983	N/A	N/A	385,025	N/A	N/A	55,958	N/A	N/A
	Full Time								
1975 1/ .	228,316	222,489	-2.6	210,641	206,797	-1.8	17,675	15,692	-11.2
1976	233,748	224,115	-4.1	215,355	210,117	-2.4	18,393	13,998	-23.9
1977	238,202	227,862	-4.3	218,226	212,576	-2.6	19,976	15,286	-23.5
1978 2/ .	NA	225,072	NA	217,588	209,380	-3.8	NA	15,692	NA
1979	243,331	233,089	-4.2	224,057	216,801	-3.2	19,274	16,288	-15.5
1980	249,111	239,855	-3.7	230,601	223,012	-3.3	18,510	16,843	-9.0
1981	253,428	243,671	-3.9	234,529	226,921	-3.2	18,899	16,750	-11.4
1982	255,959	246,218	-3.8	237,676	229,993	-3.2	18,283	16,225	-11.3
1983	263,800	253,735	-3.8	243,646	236,076	-3.1	20,154	17,659	-12.4
1984 3/ .	264,146	255,597	-3.2	246,848	237,460	-3.8	17,298	18,137	4.9
1985 3/ .	269,319	259,467	-3.7	249,666	241,605	-3.2	19,653	17,862	-9.1
1986 3/ .	279,235	268,404	-3.9	259,980	250,470	-3.7	19,255	17,934	-6.9
1987 3/ .	285,200	273,434	-4.1	264,862	254,865	-3.8	20,338	18,569	-8.7
1988	288,619	278,167	-3.6	268,385	259,848	-3.2	20,234	18,319	-9.5
1989	286,619	N/A	N/A	267,554	N/A	N/A	19,065	N/A	N/A
	Part Time								
1975 1/ .	108,527	109,169	0.6	80,021	85,150	6.4	28,506	24,019	-15.7
1976	112,231	110,645	-1.4	81,925	85,409	4.3	30,306	25,236	-16.7
1977	124,776	119,194	-4.5	88,484	90,872	2.7	36,292	28,322	-22.0
1978 2/ .	NA	120,115	NA	94,394	90,591	-4.0	NA	29,524	NA
1979	131,936	126,905	-3.8	97,713	96,015	-1.7	34,223	30,890	-9.7
1980	134,099	130,038	-3.0	103,057	99,834	-3.1	31,042	30,204	-2.7
1981	138,606	134,433	-3.0	105,674	102,781	-2.7	32,932	31,652	-3.9
1982	143,723	138,838	-3.4	109,738	106,228	-3.2	33,985	32,610	-4.0
1983	149,764	140,313	-6.3	114,630	106,995	-6.7	35,134	33,318	-5.2
1984 3/ .	150,918	142,581	-5.5	116,622	108,971	-6.6	34,296	33,610	-2.0
1985 3/ .	165,517	148,475	-10.3	121,386	114,417	-5.7	44,131	34,058	-22.8
1986 3/ .	166,867	150,934	-9.5	124,223	116,693	-6.1	42,644	34,241	-19.7
1987 3/ .	164,385	151,924	-7.6	123,819	117,596	-5.0	40,566	34,328	-15.6
1988	156,976	151,664	-3.4	123,298	117,826	-4.4	33,678	33,838	0.5
1989	154,364	N/A	N/A	117,471	N/A	N/A	36,893	N/A	N/A

1/ The 1976 survey collected data 1975 data from master's-granting institutions.

2/ Master's-granting institutions were not surveyed in 1978.

3/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: NA = not availible. N/A = not applicable. See Text for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

section ii.

listing of institutions in the fall 1989 survey

The graduate institutions included in the 1989 survey are listed in alphabetical order by State in tables II-1 and II-2. Table II-1 lists all doctorate-granting institutions in the universe and their separately-reported components, with their institutional codes as assigned by the Federal Interagency Committee on Education (FICE). Table II-2 contains the same information for all master's-granting institutions in the universe. Institutional FICE codes are provided for the convenience of those wishing to request Institutional Profiles (see General Notes, p. vi), for their own or selected peer institutions. Note that these profiles are available only at the institutional level; separate profiles are not available for individual components or branch campuses within an institution. Summary profiles representing totals for all doctorate-granting institutions or for all Historically Black Colleges and Universities (HBCUs) may also be ordered.

Table II-1. Doctorate-granting institutions in the fall 1989 survey

Alabama

FICE CODE		
008695	L	Auburn University
		Graduate School (Main Campus)
		Graduate School at Montgomery
001051		The University of Alabama
001052		The University of Alabama at Birmingham
		Graduate School
		School of Medicine
001055		The University of Alabama at Huntsville
001057		University of South Alabama
		College of Medicine
		Graduate School

Alaska

FICE CODE		
029094	L	University of Alaska at Fairbanks

Arizona

FICE CODE		
001081		Arizona State University
001082		Northern Arizona University
001083	L	University of Arizona
		College of Medicine
		Graduate School

Arkansas

FICE CODE		
001108	L	University of Arkansas
001109		University of Arkansas Med Sci Campus

California

FICE CODE		
001122		Biola University
012154		California Inst of Integral Studies
001131		California Institute of Technology
011881		Calif Sch of Prof Psych - Fresno
010013		Calif Sch of Prof Psych - Los Angeles
011117		Calif Sch of Prof Psych - San Diego
009844		Calif Sch of Prof Psych - Berk/Alameda
000166		Charles R. Drew Univ of Medicine & Sci
001169		Claremont Univ Center & Graduate School
029092		The Fielding Institute
001200		Fuller Theological Seminary
001205		Golden Gate University
001218		Loma Linda University
		Graduate School
		School of Medicine
029225		Pacific Grad School of Prof Psych
010441		Rand Graduate Institute Policy Studies
001151		San Diego State University
001326		Santa Clara University
001305		Stanford University
		Graduate School
		School of Medicine
001312	L	University of Calif at Berkeley
001313	L	University of Calif at Davis
001314	L	University of Calif at Irvine
		College of Medicine
		Graduate School
001315	L	University of Calif at Los Angeles
		Graduate School
		School of Medicine
001316	L	University of Calif at Riverside
001317	L	University of Calif at San Diego
		Graduate School
		School of Medicine
001319	L	University of Calif at San Francisco
001320	L	University of Calif at Santa Barbara
001321	L	University of Calif at Santa Cruz
001328		University of Southern California
		Graduate School
		School of Medicine
001329		University of the Pacific
001158		US International University
001310		US Naval Postgraduate School
008846		The Wright Institute

Colorado

FICE CODE		
001348		Colorado School of Mines
001350	L	Colorado State University
008717		University of Colorado
		Graduate School at Boulder
		Graduate School at Colorado Springs
		Graduate School at Denver
		Graduate School of Public Affairs
		School of Medicine
001371		University of Denver
001349		University of Northern Colorado

Connecticut

FICE CODE		
008718		University of Connecticut
		Graduate School
		School of Medicine
001424		Wesleyan University
001426		Yale University
		Graduate School
		School of Medicine
		School of Nursing

Delaware

FICE CODE		
001431	L	University of Delaware

District of Columbia

FICE CODE		
001434		The American University
001437		Catholic University of America
001444		George Washington University
		Graduate School
		School of Medicine and Health Sci
001445		Georgetown University
		Graduate School
		School of Medicine
001448	H	Howard University
		College of Medicine
		Graduate School

Florida

FICE CODE		
001480	H L	Florida A & M University
001481		Florida Atlantic University
001469		Florida Institute of Technology
009635		Florida International University
001489	L	Florida State University
001509		Nova University
003954		University of Central Florida
001535		University of Florida
		Graduate School
		College of Medicine
		College of Nursing
001536		University of Miami
		Graduate School
		School of Medicine
001537		University of South Florida
		College of Medicine
		Graduate School

Georgia

FICE CODE		
001559	H	Clark Atlanta University
001564		Emory University
		Graduate School
		School of Medicine
008723		Georgia Institute of Technology
001574		Georgia State University
005010		Institute of Paper Science & Technology
001579		Medical College of Georgia
008724		Mercer University
		Graduate School
		School of Medicine
		Southern School of Pharmacy
029297	H	Morehouse School of Medicine
001598	L	University of Georgia

Table II-1. Doctorate-granting institutions in the fall 1989 survey -- Continued

FICE CODE		
		Hawaii
001610	L	University of Hawaii at Manoa
		Graduate School
		John A. Burns School of Medicine
		Idaho
001620		Idaho State University
001626	L	University of Idaho
		Illinois
001657		Chicago College of Osteo Medicine
029230		Chicago School of Prof Psych
001671		De Paul University
029239		Forest Institute of Prof Psych
001691		Illinois Institute of Technology
001692		Illinois State University
001710		Loyola University of Chicago
		Graduate School
		Grad Sch at the Medical Center
		Stritch School of Medicine
001737		Northern Illinois University
001739		Northwestern University
		Graduate School
		Medical School
009800		Rush University
001758		Southern Illinois Univ at Carbondale
001774		University of Chicago
		Graduate School
		Pritzker School of Medicine
001659		University of Health Sciences (Chicago)
001776	L	University of Illinois at Chicago
001775	L	University of Illinois at Urbana
		Indiana
001786		Ball State University
001807		Indiana State University
008731		Indiana University
		Graduate School - Bloomington
		Fort Wayne Campus
		Indiana University - Purdue
		School of Dentistry
		School of Medicine
		South Bend Campus
008732	L	Purdue University
		Calumet
		Graduate School
001840		University of Notre Dame
		Iowa
001869	L	Iowa State University of Sci & Tech
011113		Maharishi International University
001855		Univ. of Osteopathic Med & Health Sci
001892		University of Iowa
		College of Medicine
		Graduate School
001890		University of Northern Iowa
		Kansas
001928	L	Kansas State University
029001		University of Kansas
		Graduate School
		Medical Center
001950		Wichita State University
		Kentucky
001960		Spalding University
008744	L	University of Kentucky
		College of Medicine
		Graduate School
001999		University of Louisville
		Graduate School
		School of Medicine
		Louisiana
008745	L	Louisiana State University System
		Graduate School
		Graduate School at Baton Rouge
		Medical Center at New Orleans
		School of Medicine at Shreveport
002008		Louisiana Tech University
002020		Northeast Louisiana University
002029		Tulane University of Louisiana
		Graduate School
		School of Medicine
		School of Public Hlth & Tropical Med
002031		University of Southwestern Louisiana
002032	H	Xavier University
		Maine
002053	L	University of Maine at Orono
002050		University of New England
		Maryland
002077		Johns Hopkins University
		Graduate School
		School of Hygiene and Public Health
		School of Medicine
029169		Uniform Serv Univ of the Health Sci
002104	L	University of Maryland - Balt Prof Sch
002105	L	University of Maryland - Baltimore Cnty
002103	L	University of Maryland - College Park
002106	H	University of Maryland - Eastern Shore
		Massachussetts
002128		Boston College
002130		Boston University
		Graduate School
		School of Dentistry
		School of Medicine
002133		Brandeis University
002139		Clark University
002155		Harvard University
		Graduate School of Arts & Sciences
		School of Public Health
		Harvard Medical School
002165		Mass College of Pharmacy/Allied Health
002178	L	Massachusetts Institute of Technology
002199		Northeastern University
002209		Smith College
002219		Tufts University
		Graduate School
		Sackler Sch of Grad Biomedical Sci
		School of Medicine
		School of Nutrition
002161		University of Lowell
008755	L	University of Massachusetts
		Graduate School at Amherst
		Graduate School at Boston
		School of Medicine at Worcester
002230		Woods Hole Oceanographic Institution
002233		Worcester Polytechnic Institute
		Michigan
002238		Andrews University
002243		Central Michigan University
002290	L	Michigan State University
002292		Michigan Technological University
002307		Oakland University
002323		University of Detroit
009091		University of Michigan
		Graduate School at Ann Arbor
		Graduate School at Dearborn
		Medical School at Ann Arbor
002329		Wayne State University
		Graduate School
		School of Medicine
002330		Western Michigan University

Table II-1. Doctorate-granting institutions in the fall 1989 survey -- Continued

FICE CODE		
		Minnesota
010337		Mayo Graduate School
008761	L	University of Minnesota
		Duluth School of Medicine
		Graduate School at Duluth
		Graduate School at Minneapolis
		Minneapolis Medical School
		Mississippi
002423	L	Mississippi State University
008764		University of Mississippi
		Graduate School
		School of Medicine
002441		University of Southern Mississippi
		Missouri
002477		Kirksville College of Osteopathic Med
008766		St. Louis University
		Graduate School
		School of Medicine
002474		University of Health Sci (Kansas City)
002516	L	University of Missouri - Columbia
		Graduate School
		School of Medicine
002518	L	University of Missouri - Kansas City
002517	L	University of Missouri - Rolla
002519	L	University of Missouri - St Louis
002520		Washington University
		Graduate School
		School of Medicine
		Montana
002532	L	Montana State University
002536		University of Montana
		Nebraska
002542		Creighton University
		Graduate School
		School of Medicine
002565		University of Nebraska - Lincoln
002554	L	University of Nebraska - Omaha
006895		University of Nebraska Medical Center
		Nevada
002568	L	University of Nevada at Reno
		Graduate School
		School of Medical Sciences
		New Hampshire
002573		Dartmouth College
		Graduate School
		School of Medicine
002589	L	University of New Hampshire
		New Jersey
008770		Fairleigh Dickinson University
002621		New Jersey Institute of Technology
002627		Princeton University
008771	L	Rutgers the State University
		Graduate School at New Brunswick
		Graduate School at Newark
		School of Criminal Justice
002632		Seton Hall University
002639		Stevens Institute of Technology
002620		Univ of Med and Dent of New Jersey
		Grad Sch of Biomed Sci/NJ Med School
		New Jersey Dental School
		New Jersey Medical School at Newark
		New Jersey School of Osteopathic Med
		Robt Wood Johnson Medical School

FICE CODE		
		New Mexico
002654		New Mexico Institute of Mining and Tech
008773	L	New Mexico State University
002663		University of New Mexico
		Graduate School
		School of Medicine
		New York
002666		Adelphi University
002887		Albany Medical Center Graduate School
002668		Alfred University
002699		Clarkson University
002707		Columbia University Main Division
		College of Phys and Surgeons
		Graduate School
003979		Columbia University Teachers College
008779	L	Cornell University
		Graduate School
		Graduate School of Medical Sciences
		Medical College
002688		CUNY City College
004063		CUNY Graduate School and Univ Center
007022		CUNY Herbert H. Lehman College
002689		CUNY Hunter College
007026		CUNY Mt. Sinai Sch of Medicine
002722		Fordham University
002732		Hofstra University
008780		Long Island University
		Brooklyn Center
		Brentwood Center
		C. W. Post Center
		Rockland Campus
		Westchester Center
002780		New School for Social Research
008782		New York Institute of Technology
002784		New York Medical College
002785		New York University
		Graduate School
		School of Medicine
		Wagner Graduate Sch of Public Serv
008784		Pace University
002796		Polytechnic University
002803		Rensselaer Polytechnic Institute
002807		Rockefeller University
002823		St John's University
002835		SUNY - Albany
002836		SUNY - Binghamton
009554		SUNY - Buffalo
		Graduate School
		School of Medicine
002851		SUNY - Coll of Env Science and Forestry
002839		SUNY - Health Sci Ctr at Brooklyn
002840		SUNY - Health Sci Ctr at Syracuse
009555		SUNY - Stony Brook
		Graduate School
		School of Medicine
009929		SUNY State College of Optometry
008789		Syracuse University
002889		Union College (NY)
002894		University of Rochester
		Graduate School
		School of Medicine and Dentistry
002903		Yeshiva University
		Albert Einstein College of Medicine
		Graduate School
		North Carolina
002920		Duke University
		Graduate School
		School of Medicine
002923		East Carolina University
		Graduate School
		School of Medicine
002972	L	North Carolina State Univ at Raleigh

(continued, next page)

Table II-1. Doctorate-granting institutions in the fall 1989 survey -- Continued

FICE CODE		
		North Carolina, continued
002974		Univ of North Carolina at Chapel Hill
		Graduate School
		School of Medicine
002976		Univ of North Carolina at Greensboro
002978		Wake Forest University
		Bowman Gray School of Medicine
		Graduate School
		North Dakota
009266	L	North Dakota State University
008794		University of North Dakota
		Ohio
003009		Air Force Institute of Technology
008795		Antioch University
008796		Bowling Green State University
003024		Case Western Reserve University
		Graduate School
		School of Medicine
003032		Cleveland State University
008799		Kent State University
007737		Medical College of Ohio at Toledo
008800		Miami University
029045		NE Ohio Univ Med School
008802	L	Ohio State University
		College of Medicine
		Graduate School
008803		Ohio University
		College of Osteopathic Medicine
		Graduate College
010923		Union Institute
012310		University of Akron
008805		University of Cincinnati
		College of Medicine
		Graduate School
003127		University of Dayton
003131		University of Toledo
009167		Wright State University
		Oklahoma
008806	L	Oklahoma State University
003985		Oral Roberts University
008807		University of Oklahoma
		Graduate College
		Health Sciences Center
003185		University of Tulsa
		Oregon
008856		Oregon Grad Inst of Sci & Technology
004882		Oregon Health Sciences University
003210	L	Oregon State University
003216		Portland State University
003223		University of Oregon
		Pennsylvania
003237		Bryn Mawr College
003242		Carnegie-Mellon University
003256		Drexel University
003258		Duquesne University
003271		Hahnemann University
008810		Indiana University of Pennsylvania
003289		Lehigh University
003398		The Medical College of Pennsylvania
008813	L	Pennsylvania State University
		College of Medicine
		Graduate School
003352		Phila College of Osteopathic Medicine
003353		Philadelphia Coll of Pharmacy and Sci
		(continued, next column)
		Pennsylvania, continued
003371		Temple University
		Graduate School
		School of Medicine
		School of Pharmacy
003278		Thomas Jefferson University
003378		University of Pennsylvania
		Graduate School
		School of Medicine
008815		University of Pittsburgh
		Graduate School
		School of Medicine
003388		Villanova University
		Rhode Island
003401		Brown University
003406		Providence College
003414	L	University of Rhode Island
		South Carolina
003425	L	Clemson University
003438		Medical University of South Carolina
008819		University of South Carolina
		Graduate School
		Medical School
		South Dakota
003470		South Dakota School of Mines and Tech
003471	L	South Dakota State University
003474		University of South Dakota
		Graduate School
		School of Medicine
		Tennessee
003487		East Tennessee State University
003506	H	Meharry Medical College
003509		Memphis State University
003523		Tennessee Technological University
003530	L	University of Tennessee at Knoxville
006725	L	University of Tennessee at Memphis
003535		Vanderbilt University
		Graduate School
		School of Medicine
		Texas
004948		Baylor College of Dentistry
004949		Baylor College of Medicine
006967		Baylor University
003565		East Texas State University
003581		Lamar University
003604		Rice University
003606		Sam Houston State University
003613		Southern Methodist University
003624		Stephen F. Austin State University
003632	L	Texas A & M University
003636		Texas Christian University
009768		Texas College of Osteopathic Medicine
003644		Texas Tech University
		Graduate School
		Health Sciences Center
003646		Texas Woman's University
003656		Univ of Texas at Arlington
003658		Univ of Texas at Austin
009741		Univ of Texas at Dallas
003661		Univ of Texas at El Paso
011618		Univ of Texas Hlth Sci Ctr at Houston
003659		Univ of Texas Hlth Sci Ctr at San Antn
003657		Univ of Texas MD Anderson Cancer Center
004952		Univ of Texas Med Branch at Galveston
003660		Univ of Texas SW Medical Ctr at Dallas
003652		University of Houston - University Park
003594		University of North Texas

Table II-1. Doctorate-granting institutions in the fall 1989 survey -- Continued

FICE CODE		
		Utah
012305		Brigham Young University
003675		University of Utah
		College of Medicine
		Graduate School
003677	L	Utah State University
		Vermont
003696	L	University of Vermont & St Agric Col
		College of Medicine
		Graduate School
		Virginia
008828		College of William and Mary
010338		Eastern Virginia Medical School
003749		George Mason University
003717		Institute of Textile Technology
003728		Old Dominion University
003745		University of Virginia
		Graduate School
		School of Medicine
003735		Virginia Commonwealth University
		Graduate School
		Medical College of Virginia
003754	L	Virginia Polytechnic Inst and St Univ
		Washington
003798		University of Washington
		Graduate School
		School of Public Health and Comm Med
		School of Medicine
003800	L	Washington State University
		West Virginia
003815		Marshall University
		Graduate School
		School of Medicine
011245		West Virginia Sch of Osteopathic Med
003827	L	West Virginia University
		Graduate School
		School of Medicine
		Wisconsin
003863		Marquette University
008296		Medical College of Wisconsin
003895	L	University of Wisconsin - Madison
		Graduate School
		Medical School
003896		University of Wisconsin - Milwaukee
		Wyoming
003932	L	University of Wyoming
		OUTLYING AREAS
		Puerto Rico
003936		Catholic University of Puerto Rico
029063		Cntr for Adv Studies on PR & Caribbean
029268		Ponce School of Medicine
003944	L	Univ of Puerto Rico
007108	L	Univ of Puerto Rico - Rio Piedras
003945	L	Univ of Puerto Rico Med Sci Campus

NOTE: H indicates a Historically Black institution
L indicates a Land Grant institution

Table II-2. Master's-granting institutions in the fall 1989 survey

FICE CODE		
		Alabama
001002	H L	Alabama A & M University
001005	H	Alabama State University
001020		Jacksonville State University
001049		Troy State University at Montgomery
001050	H	Tuskegee University
001004		University of Montevallo
		Alaska
029095		University of Alaska at Anchorage
029096		University of Alaska Southeast
		Arkansas
008701		Arkansas State University
001101		University of Arkansas at Little Rock
001092		University of Central Arkansas
		California
001117		Azusa Pacific University
001143		Calif Poly State Univ at San Luis Obispo
001144		Calif State Polytechnic Univ at Pomona
007993		Calif State Univ at Bakersfield
001146		Calif State Univ at Chico
001141		Calif State Univ at Dominguez Hills
001147		Calif State Univ at Fresno
001137		Calif State Univ at Fullerton
001138		Calif State Univ at Hayward
001139		Calif State Univ at Long Beach
001140		Calif State Univ at Los Angeles
001153		Calif State Univ at Northridge
001150		Calif State Univ at Sacramento
001142		Calif State Univ at San Bernardino
001157		Calif State Univ of Stanislaus
001164		Chapman College
001196		Dominican College of San Rafael
001171		Harvey Mudd College
001149		Humboldt State University
004484		John F Kennedy University
011649		Loyola Marymount University
011460		National University
001248		Northrop University
001249		Occidental College
001257		Pacific States University
001264		Pepperdine University
001154		San Francisco State University
001155		San Jose State University
001156		Sonoma State University
001216		University of La Verne
001322		University of Redlands
010395		University of San Diego
001325		University of San Francisco
008716		West Coast University
		Connecticut
001378		Central Connecticut State University
001379		Connecticut College
002804		The Hartford Graduate Center
001402		Quinnipiac College
001406		Southern Connecticut State University
001409		St. Joseph College
001414		Trinity College
001416		University of Bridgeport
001422		University of Hartford
001397		University of New Haven
001380		Western Connecticut State University
		Delaware
001428	H L	Delaware State University
		District of Columbia
001443		Gallaudet University
029100	H L	University of the District of Columbia
		Florida
001495		Jacksonville University
003955		University of West Florida
		Georgia
001552		Augusta College
001566	H L	Fort Valley State University
001602		Georgia College
001572		Georgia Southern College
001599		Valdosta State College
001601		West Georgia College
		Illinois
001641		Bradley University
001694		Chicago State University
001674		Eastern Illinois University
009145		Governors State University
001693		Northeastern Illinois University
001749		Roosevelt University
009333		Sangamon State University
001759		Southern Illinois Univ at Edwardsville
001780		Western Illinois University
		Indiana
001788		Butler University
001822		Indiana Wesleyan University
001830		Rose-Hulman Institute of Technology
001832		Saint Francis College
001795		University of Evansville
001842		Valparaiso University
		Iowa
001860		Drake University
001873		Loras College
001876		Marycrest College
		Kansas
001927		Emporia State University - Kansas
001915		Fort Hays State University
001926		Pittsburg State University
001949		Washburn University of Topeka
		Kentucky
001963		Eastern Kentucky University
001976		Morehead State University (KY)
001977		Murray State University
002002		Western Kentucky University
		Louisiana
002006	H	Grambling State University
002016		Loyola University in New Orleans
002017		McNeese State University
002005		Nicholls State University
002021		Northwestern State Univ of Louisiana
002024		Southeastern Louisiana University
002025	H L	Southern University A & M College
		Maryland
002068	H	Coppin State College
002072		Frostburg State University
002076		Hood College
002078		Loyola College
002083	H	Morgan State University
002099		Towson State University
002102		University of Baltimore
002108		Washington College

Table II-2. Master's-granting institutions in the fall 1989 survey -- Continued

FICE CODE		
		Massachussets
002114		American International College
002117		Anna Maria College
002118		Assumption College
002183		Bridgewater State College
002146		Emerson College
002185		Framingham State College
029365		MGH Institute of Health Professions
002192		Mount Holyoke College
002188		Salem State College
002210		Southeastern Massachusetts University
002226		Western New England College
002229		Williams College
002190		Worcester State College
		Michigan
002259		Eastern Michigan University
002268		Grand Valley State University
002301		Northern Michigan University
		Minnesota
002336		Bemidji State University
002360		Mankato State University
002367		Moorhead State University (MN)
002380		St. Mary's College of Minnesota
002377		St. Cloud State University
		Mississippi
002410	H	Jackson State University
002422		Mississippi University for Women
		Missouri
002454		Central Missouri State University
002479	H L	Lincoln University
002495		Northeast Missouri State University
002496		Northwest Missouri State University
002501		Southeast Missouri State University
002503		Southwest Missouri State University
		Montana
002531		Montana College Mineral Sci & Technology
		Nebraska
002551		Kearney State College
		Nevada
002569		University of Nevada at Las Vegas
		New Hampshire
002586		Rivier College
		New Jersey
002603		Drew University
002622		Kean College of New Jersey
002616		Monmouth College (NJ)
002617		Montclair State College
002642		Trenton State College
002625		William Paterson College
		New Mexico
008772		Eastern New Mexico University
002653		New Mexico Highlands University
		New York
002704		College of New Rochelle
002705		College of St Rose
002710		Cooper Union
004766		CUNY Bernard Baruch College
002687		CUNY Brooklyn College
029040		CUNY College of Staten Island St George
002693		CUNY John Jay College of Crim Justice
002690		CUNY Queens College
002737		Iona College
002739		Ithaca College
002758		Manhattan College
002765		Marist College
002788		Niagara University
002798		Pratt Institute
002806		Rochester Institute of Technology
008786		Russell Sage College
002813		Sarah Lawrence College
002817		St Bonaventure University
002841		SUNY College at Brockport
002842		SUNY College at Buffalo
002843		SUNY College at Cortland
002844		SUNY College at Fredonia
002845		SUNY College at Geneseo
002846		SUNY College at New Paltz
002847		SUNY College at Oneonta
002848		SUNY College at Oswego
002849		SUNY College at Plattsburgh
002850		SUNY College at Potsdam
006792		SUNY College of Technology at Utica/Rome
002895		Vassar College
002899		Wagner College
		North Carolina
002906		Appalachian State University
002905	H L	North Carolina A & T State University
002950	H	North Carolina Central University
002975		Univ of North Carolina at Charlotte
002984		Univ of North Carolina at Wilmington
002981		Western Carolina University
		Ohio
003050		John Carroll University
003144		Xavier University
003145		Youngstown State University
		Oklahoma
003154		East Central University
003181		Southwestern Oklahoma State University
		Oregon
003212		Pacific University
003219		Southern Oregon State College
003224		University of Portland
		Pennsylvania
003315		Bloomsburg University of Pennsylvania
003238		Bucknell University
003316		California University of Pennsylvania
009234		Clarion University of Pennsylvania
003320		East Stroudsburg Univ of Pennsylvania
003321		Edinboro University of Pennsylvania
003266		Gannon University
003322		Kutztown University of Pennsylvania
003324		Mansfield University of Pennsylvania

(continued, next page)

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FICE CODE		
		Pennsylvania, continued
003296		Marywood College
003325		Millersville University of Pennsylvania
003326		Shippensburg University of Pennsylvania
003327		Slippery Rock University of Pennsylvania
003367		St Joseph's University
003370		Swarthmore College
003384		University of Scranton
003328		West Chester University of Pennsylvania
003313		Widener University
003394		Wilkes University
		Rhode Island
003407		Rhode Island College
		South Carolina
003428		College of Charleston
003434		Furman University
003456		Winthrop College
		Tennessee
003478		Austin Peay State University
003490	H	Fisk University
003510		Middle Tennessee State University
003522	H L	Tennessee State University
003529	L	University of Tennessee at Chattanooga
		Texas
003537		Abilene Christian University
003541		Angelo State University
011161		Corpus Christi State University
003578		Incarnate Word College
003592		Midwestern State University
003599		Pan American University
003630	H L	Prairie View A & M University
003615		Southwest Texas State University
003623		St Mary's University of San Antonio
003625		Sul Ross State University
003631		Tarleton State University
003639		Texas A & I University
003642	H	Texas Southern University
003647		Trinity University
011854		University of Central Texas
013231		University of Houston - Victoria
011711		University of Houston - Clear Lake City
010115		University of Texas at San Antonio
029164		University of Texas at Tyler
009930		University of Texas of the Permian Basin
003665		West Texas State University

FICE CODE		
		Vermont
003686		Goddard College
003690		Marlboro College
003691		Middlebury College
		Virginia
003714	H	Hampton University
003715		Hollins College
003721		James Madison University
003732		Radford University
003744		University of Richmond
003764	H L	Virginia State University
		Washington
003771		Central Washington University
003775		Eastern Washington University
003778		Gonzaga University
003785		Pacific Lutheran University
003794		Saint Martin's College
003790		Seattle University
003799		Walla Walla College
003802		Western Washington University
003804		Whitworth College
		West Virginia
006869		Univ of West Virginia Coll of Grad Stds
003818		University of Charleston
003825		West Virginia Institute of Technology
		Wisconsin
003868		Milwaukee School of Engineering
003917		University of Wisconsin - Eau Claire
003899		University of Wisconsin - Green Bay
003919		University of Wisconsin - La Crosse
009630		University of Wisconsin - Oshkosh
003921		University of Wisconsin - Platteville
003923		University of Wisconsin - River Falls
003924		University of Wisconsin - Stevens Point
003915		University of Wisconsin - Stout
003926		University of Wisconsin - Whitewater
		OUTLYING AREAS
		Guam
003935		University of Guam

NOTE: H indicates a Historically Black institution
L indicates a Land Grant institution

section iii.

detailed statistical tables

To obtain accurate historical data, use only the latest detailed statistical tables for fall 1989 and not data published earlier. Institutions often revise prior-year data when important changes occur in reporting practices and program classifications, and only the latest tables incorporate such changes.

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Table A-1. Science/engineering graduate students in all institutions by field, highest degree granted, and enrollment status: 1989

Field	All institutions			Doctorate-granting			Master's-granting		
	Total	Full time	Part time	Total	Full time	Part time	Total	Full time	Part time
Total, all surveyed fields	440,983	286,619	154,364	385,025	267,554	117,471	55,958	19,065	36,893
Total, science/engineering fields	386,607	259,575	127,032	338,859	243,204	95,655	47,748	16,371	31,377
Engineering, total	104,922	64,580	40,342	96,998	62,379	34,619	7,924	2,201	5,723
Aerospace	3,505	2,718	787	3,438	2,688	750	67	30	37
Agricultural	1,031	851	180	1,031	851	180	0	0	0
Biomedical	1,919	1,611	308	1,853	1,572	281	66	39	27
Chemical	6,411	5,265	1,146	6,312	5,228	1,084	99	37	62
Civil	15,073	10,168	4,905	14,133	9,840	4,293	940	328	612
Electrical	33,306	18,359	14,947	30,358	17,560	12,798	2,948	799	2,149
Engineering science	2,092	1,274	818	2,073	1,264	809	19	10	9
Industrial	11,750	4,773	6,977	10,510	4,499	6,011	1,240	274	966
Mechanical	16,184	10,394	5,790	14,905	10,115	4,790	1,279	279	1,000
Metallurgical/materials	4,546	3,687	859	4,424	3,657	767	122	30	92
Mining	449	355	94	419	329	90	30	26	4
Nuclear	1,323	1,112	211	1,323	1,112	211	0	0	0
Petroleum	665	506	159	651	494	157	14	12	2
Engineering, n.e.c.	6,668	3,507	3,161	5,568	3,170	2,398	1,100	337	763
Sciences, total	281,685	194,995	86,690	241,861	180,825	61,036	39,824	14,170	25,654
Physical sciences	33,584	29,164	4,420	31,744	28,396	3,348	1,840	768	1,072
Astronomy	789	762	27	789	762	27	0	0	0
Chemistry	18,806	16,261	2,545	17,683	15,810	1,873	1,123	451	672
Physics	13,627	12,007	1,620	13,083	11,728	1,355	544	279	265
Physical sciences, n.e.c.	362	134	228	189	96	93	173	38	135
Earth, atmospheric, and ocean sciences	13,812	10,088	3,724	12,641	9,665	2,976	1,171	423	748
Atmospheric sciences	912	810	102	900	803	97	12	7	5
Geosciences	8,043	5,939	2,104	7,537	5,741	1,796	506	198	308
Oceanography	2,198	1,790	408	2,061	1,736	325	137	54	83
Earth, atm. & oc. sci., n.e.c.	2,659	1,549	1,110	2,143	1,385	758	516	164	352
Mathematical sciences	19,473	13,792	5,681	16,996	13,111	3,885	2,477	681	1,796
Computer sciences	32,914	16,026	16,888	26,588	14,088	12,500	6,326	1,938	4,388
Agricultural sciences	11,039	8,945	2,094	10,367	8,568	1,799	672	377	295
Biological sciences	49,662	41,012	8,650	45,788	39,461	6,327	3,874	1,551	2,323
Anatomy	1,109	1,030	79	1,109	1,030	79	0	0	0
Biochemistry	5,169	4,912	257	5,130	4,895	234	39	16	23
Biology	12,988	9,359	3,629	10,101	8,140	1,961	2,887	1,219	1,668
Biometry/epidemiology	1,677	1,178	499	1,677	1,178	499	0	0	0
Biophysics	655	610	45	655	610	45	0	0	0
Botany	2,998	2,585	413	2,960	2,552	408	38	33	5
Cell biology	2,215	2,153	62	2,215	2,153	62	0	0	0
Ecology	1,109	879	230	1,037	872	165	72	7	65
Entomology/parasitology	1,181	1,009	172	1,181	1,009	172	0	0	0
Genetics	1,365	1,283	82	1,321	1,240	81	44	43	1
Microbiology	4,857	4,358	499	4,793	4,349	444	64	9	55
Nutrition	4,277	2,881	1,396	3,917	2,737	1,180	360	144	216
Pathology	1,452	1,169	283	1,371	1,154	217	81	15	66
Pharmacology	2,349	2,214	135	2,347	2,214	133	2	0	2
Physiology	2,206	2,057	149	2,206	2,057	149	0	0	0
Zoology	2,089	1,774	315	2,075	1,766	309	14	8	6
Biosciences, n.e.c.	1,966	1,561	405	1,693	1,504	189	273	57	216
Psychology	46,248	30,221	16,027	33,501	24,727	8,774	12,747	5,494	7,253
Social sciences	74,953	45,747	29,206	64,236	42,809	21,427	10,717	2,938	7,779
Agricultural economics	2,276	1,912	364	2,227	1,885	342	49	27	22
Anthropology	6,154	4,412	1,742	5,942	4,337	1,605	212	75	137
Economics (except agricultural)	12,291	9,195	3,096	11,431	8,905	2,526	860	290	570
Geography	3,504	2,351	1,153	2,842	2,108	734	662	243	419
History and philosophy of science	314	283	31	314	283	31	0	0	0
Linguistics	3,355	2,468	887	2,919	2,389	530	436	79	357
Political science	29,321	14,155	15,166	23,314	12,681	10,633	6,007	1,474	4,533
Sociology	7,352	5,271	2,081	6,658	4,982	1,676	694	289	405
Sociology/anthropology	1,022	633	389	946	607	339	76	26	50
Social sciences, n.e.c.	9,364	5,067	4,297	7,643	4,632	3,011	1,721	435	1,286
Total, health fields	54,376	27,044	27,332	46,166	24,350	21,816	8,210	2,694	5,516
Dentistry	1,157	1,008	149	1,157	1,008	149	0	0	0
Neurology	690	668	22	681	665	16	9	3	6
Nursing	19,882	5,987	13,895	16,982	5,318	11,664	2,900	669	2,231
Pharmaceutical sciences	2,771	2,015	756	2,763	2,015	748	8	0	8
Preventive medicine/community health	7,744	4,206	3,538	7,605	4,171	3,434	139	35	104
Speech pathology/audiology	8,269	5,849	2,420	6,218	4,638	1,580	2,051	1,211	840
Veterinary sciences	801	668	133	782	649	133	19	19	0
Clinical medicine, n.e.c.	1,882	1,433	449	1,681	1,381	300	201	52	149
Health related, n.e.c.	11,180	5,210	5,970	8,297	4,505	3,792	2,883	705	2,178

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

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Table A-2. Science/engineering graduate students in all institutions by field, type of control, sex, and level of department: 1989

Field	Total	Type of control		Sex		Level of department	
		Public	Private	Men	Women	Doctorate	Master's
Total, all surveyed fields	440,983	307,103	133,880	272,173	168,810	313,586	127,397
Total, science/engineering fields	386,607	267,224	119,383	259,340	127,267	287,745	98,862
Engineering, total	104,922	71,121	33,801	91,159	13,763	84,554	20,368
Aerospace	3,505	2,584	921	3,260	245	3,133	372
Agricultural	1,031	981	50	944	87	920	111
Biomedical	1,919	1,208	711	1,450	469	1,710	209
Chemical	6,411	4,470	1,941	5,387	1,024	6,051	360
Civil	15,073	11,497	3,576	12,587	2,486	12,126	2,947
Electrical	33,306	20,288	13,018	29,818	3,488	27,718	5,588
Engineering science	2,092	1,272	820	1,844	248	1,578	514
Industrial	11,750	7,448	4,302	9,519	2,231	6,155	5,595
Mechanical	16,184	11,077	5,107	14,780	1,404	13,822	2,362
Metallurgical/materials	4,546	2,866	1,680	3,752	794	4,369	177
Mining	449	389	60	399	50	316	133
Nuclear	1,323	1,107	216	1,182	141	1,286	37
Petroleum	665	531	134	637	28	530	135
Engineering, n.e.c.	6,668	5,403	1,265	5,600	1,068	4,840	1,828
Sciences, total	281,685	196,103	85,582	168,181	113,504	203,191	78,494
Physical sciences	33,584	24,280	9,304	25,796	7,788	30,015	3,569
Astronomy	789	516	273	649	140	766	23
Chemistry	18,806	13,685	5,121	13,157	5,649	16,943	1,863
Physics	13,627	9,738	3,889	11,760	1,867	12,262	1,365
Physical sciences, n.e.c.	362	341	21	230	132	44	318
Earth, atmospheric, and ocean sciences	13,812	11,574	2,238	9,887	3,925	10,635	3,177
Atmospheric sciences	912	883	29	734	178	840	72
Geosciences	8,043	6,663	1,380	6,065	1,978	6,219	1,824
Oceanography	2,198	1,841	357	1,478	720	2,018	180
Earth, atm. & oc. sci., n.e.c.	2,659	2,187	472	1,610	1,049	1,558	1,101
Mathematical sciences	19,473	15,089	4,384	13,408	6,065	14,138	5,335
Computer sciences	32,914	19,327	13,587	24,878	8,036	19,375	13,539
Agricultural sciences	11,039	10,710	329	7,896	3,143	8,974	2,065
Biological sciences	49,662	36,714	12,948	27,134	22,528	42,320	7,342
Anatomy	1,109	769	340	619	490	1,079	30
Biochemistry	5,169	3,486	1,683	3,113	2,056	5,079	90
Biology	12,988	9,583	3,405	7,188	5,800	8,308	4,680
Biometry/epidemiology	1,677	960	717	724	953	1,549	128
Biophysics	655	382	273	493	162	655	0
Botany	2,998	2,739	259	1,854	1,144	2,855	143
Cell biology	2,215	1,255	960	1,278	937	2,189	26
Ecology	1,109	974	135	661	448	1,008	101
Entomology/parasitology	1,181	1,115	66	817	364	1,147	34
Genetics	1,365	936	429	675	690	1,306	59
Microbiology	4,857	3,618	1,239	2,590	2,267	4,685	172
Nutrition	4,277	3,517	760	1,253	3,024	3,258	1,019
Pathology	1,452	995	457	843	609	1,253	199
Pharmacology	2,349	1,624	725	1,349	1,000	2,281	68
Physiology	2,206	1,515	691	1,313	893	2,087	119
Zoology	2,089	1,962	127	1,296	793	2,039	50
Biosciences, n.e.c.	1,966	1,284	682	1,068	898	1,542	424
Psychology	46,248	26,934	19,314	15,966	30,282	29,055	17,193
Social sciences	74,953	51,475	23,478	43,216	31,737	48,679	26,274
Agricultural economics	2,276	2,165	111	1,694	582	1,960	316
Anthropology	6,154	4,503	1,651	2,564	3,590	5,210	944
Economics (except agricultural)	12,291	7,802	4,489	8,957	3,334	10,236	2,055
Geography	3,504	3,318	186	2,308	1,196	1,992	1,512
History and philosophy of science	314	154	160	198	116	304	10
Linguistics	3,355	2,326	1,029	1,345	2,010	2,319	1,036
Political science	29,321	18,608	10,713	17,230	12,091	15,447	13,874
Sociology	7,352	5,502	1,850	3,383	3,969	5,898	1,454
Sociology/anthropology	1,022	724	298	454	568	636	386
Social sciences, n.e.c.	9,364	6,373	2,991	5,083	4,281	4,677	4,687
Total, health fields	54,376	39,879	14,497	12,833	41,543	25,841	28,535
Dentistry	1,157	898	259	813	344	273	884
Neurology	690	402	288	411	279	681	9
Nursing	19,882	15,048	4,834	1,073	18,809	9,312	10,570
Pharmaceutical sciences	2,771	2,095	676	1,633	1,138	2,377	394
Preventive medicine/community health	7,744	5,077	2,667	2,912	4,832	4,870	2,874
Speech pathology/audiology	8,269	6,916	1,353	839	7,430	3,258	5,011
Veterinary sciences	801	718	83	470	331	678	123
Clinical medicine, n.e.c.	1,882	1,291	591	954	928	1,145	737
Health related, n.e.c.	11,180	7,434	3,746	3,728	7,452	3,247	7,933

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-3. Science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1989

Field	Total	U.S. citizens						Foreign
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	440,983	14,149	1,079	17,518	11,505	274,365	20,552	101,815
Total, science/engineering fields	386,607	11,744	863	16,057	9,559	232,439	18,049	97,896
Engineering, total	104,922	1,657	124	6,075	1,734	51,959	6,708	36,665
Aerospace	3,505	27	5	145	49	2,043	138	1,098
Agricultural	1,031	6	0	18	7	436	18	546
Biomedical	1,919	25	3	89	31	1,102	31	638
Chemical	6,411	79	10	248	111	3,065	130	2,768
Civil	15,073	252	22	636	292	7,498	495	5,878
Electrical	33,306	559	37	2,658	553	15,685	2,806	11,008
Engineering science	2,092	25	5	95	15	1,279	29	644
Industrial	11,750	292	17	478	253	7,043	689	2,978
Mechanical	16,184	200	13	844	214	7,565	1,592	5,756
Metallurgical/materials	4,546	34	5	272	53	2,163	92	1,927
Mining	449	3	0	17	2	200	8	219
Nuclear	1,323	12	2	36	28	723	7	515
Petroleum	665	6	0	22	15	295	3	324
Engineering, n.e.c.	6,668	137	5	517	111	2,862	670	2,366
Sciences, total	281,685	10,087	739	9,982	7,825	180,480	11,341	61,231
Physical sciences	33,584	603	44	1,160	680	18,327	973	11,797
Astronomy	789	6	0	36	13	553	17	164
Chemistry	18,806	410	25	705	464	10,515	601	6,086
Physics	13,627	173	19	412	194	6,993	338	5,498
Physical sciences, n.e.c.	362	14	0	7	9	266	17	49
Earth, atmospheric, and ocean sciences	13,812	95	27	208	209	10,250	433	2,590
Atmospheric sciences	912	7	0	45	8	595	9	248
Geosciences	8,043	42	19	93	106	6,079	306	1,398
Oceanography	2,198	21	0	30	68	1,470	54	555
Earth, atm. & oc. sci., n.e.c.	2,659	25	8	40	27	2,106	64	389
Mathematical sciences	19,473	469	34	774	308	10,222	1,041	6,625
Computer sciences	32,914	842	42	2,741	546	16,745	2,330	9,668
Agricultural sciences	11,039	151	24	250	293	7,226	282	2,813
Biological sciences	49,662	1,224	90	2,089	1,226	32,897	1,303	10,833
Anatomy	1,109	29	4	51	21	769	8	227
Biochemistry	5,169	70	6	315	82	3,086	63	1,547
Biology	12,988	442	24	486	488	9,010	586	1,952
Biometry/epidemiology	1,677	84	6	84	58	1,086	4	355
Biophysics	655	4	1	61	8	367	6	208
Botany	2,998	41	10	84	41	1,802	77	943
Cell biology	2,215	21	5	93	54	1,542	19	481
Ecology	1,109	14	1	8	18	883	38	147
Entomology/parasitology	1,181	16	1	41	30	752	16	325
Genetics	1,365	26	2	46	16	942	26	307
Microbiology	4,857	80	7	212	116	3,153	173	1,116
Nutrition	4,277	124	7	166	89	2,640	113	1,138
Pathology	1,452	44	1	54	21	994	29	309
Pharmacology	2,349	61	5	138	48	1,525	37	535
Physiology	2,206	61	4	134	36	1,386	32	553
Zoology	2,089	42	5	32	38	1,611	59	302
Biosciences, n.e.c.	1,966	65	1	84	62	1,349	17	388
Psychology	46,248	2,056	182	821	1,775	37,783	1,989	1,642
Social sciences	74,953	4,647	296	1,939	2,788	47,030	2,990	15,263
Agricultural economics	2,276	63	3	58	59	1,090	15	988
Anthropology	6,154	118	53	117	172	4,646	294	754
Economics (except agricultural)	12,291	308	68	432	266	5,548	485	5,184
Geography	3,504	72	11	61	58	2,672	138	492
History and philosophy of science	314	3	0	15	3	232	17	44
Linguistics	3,355	156	10	83	137	1,702	90	1,177
Political science	29,321	2,386	84	742	1,392	19,748	1,420	3,549
Sociology	7,352	504	33	199	247	4,534	194	1,641
Sociology/anthropology	1,022	98	1	11	20	690	39	163
Social sciences, n.e.c.	9,364	939	33	221	434	6,168	298	1,271
Total, health fields	54,376	2,405	216	1,461	1,946	41,926	2,503	3,919
Dentistry	1,157	29	1	60	23	811	49	184
Neurology	690	12	1	44	17	503	8	105
Nursing	19,882	922	78	399	493	17,245	468	277
Pharmaceutical sciences	2,771	68	8	95	83	1,342	177	998
Preventive medicine/community health	7,744	395	45	306	526	4,802	618	1,052
Speech pathology/audiology	8,269	366	20	143	267	6,844	289	340
Veterinary sciences	801	26	2	18	10	527	18	200
Clinical medicine, n.e.c.	1,882	58	5	123	55	1,270	93	278
Health related, n.e.c.	11,180	529	56	273	472	8,582	783	485

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-4. Science/engineering graduate students in all institutions by geographic distribution, highest degree granted, and enrollment status: 1989

Division and State	All institutions			Doctorate-granting			Master's-granting		
	Total	Full time	Part time	Total	Full time	Part time	Total	Full time	Part time
Total, all institutions	440,983	286,619	154,364	385,025	267,554	117,471	55,958	19,065	36,893
New England	32,778	21,900	10,878	28,356	20,918	7,438	4,422	982	3,440
Connecticut	7,213	4,086	3,127	4,394	3,571	823	2,819	515	2,304
Maine	667	505	162	667	505	162	0	0	0
Massachusetts	20,965	14,380	6,585	19,628	13,987	5,641	1,337	393	944
New Hampshire	1,131	800	331	986	785	201	145	15	130
Rhode Island	2,138	1,622	516	2,063	1,609	454	75	13	62
Vermont	664	507	157	618	461	157	46	46	0
Middle Atlantic	78,800	43,790	35,010	69,241	41,644	27,597	9,559	2,146	7,413
New Jersey	11,645	5,807	5,838	10,924	5,661	5,263	721	146	575
New York	46,524	25,173	21,351	40,214	23,978	16,236	6,310	1,195	5,115
Pennsylvania	20,631	12,810	7,821	18,103	12,005	6,098	2,528	805	1,723
East North Central	78,219	54,780	23,439	70,861	52,462	18,399	7,358	2,318	5,040
Illinois	23,543	15,985	7,558	19,406	14,756	4,650	4,137	1,229	2,908
Indiana	9,357	7,370	1,987	8,954	7,290	1,664	403	80	323
Michigan	15,943	10,708	5,235	14,687	10,361	4,326	1,256	347	909
Ohio	19,995	13,831	6,164	19,636	13,636	6,000	359	195	164
Wisconsin	9,381	6,886	2,495	8,178	6,419	1,759	1,203	467	736
West North Central	28,993	19,638	9,355	25,983	18,250	7,733	3,010	1,388	1,622
Iowa	5,192	4,187	1,005	4,971	4,147	824	221	40	181
Kansas	5,164	2,907	2,257	4,605	2,594	2,011	559	313	246
Minnesota	7,246	5,556	1,690	5,681	4,771	910	1,565	785	780
Missouri	7,150	4,132	3,018	6,536	3,892	2,644	614	240	374
Nebraska	2,380	1,456	924	2,329	1,446	883	51	10	41
North Dakota	950	785	165	950	785	165	0	0	0
South Dakota	911	615	296	911	615	296	0	0	0
South Atlantic	65,417	40,543	24,874	59,839	38,605	21,234	5,578	1,938	3,640
Delaware	1,236	880	356	1,218	878	340	18	2	16
District of Columbia	8,273	3,416	4,857	8,176	3,354	4,822	97	62	35
Florida	12,838	7,849	4,989	12,513	7,765	4,748	325	84	241
Georgia	7,599	5,330	2,269	6,902	5,044	1,858	697	286	411
Maryland	9,620	5,242	4,378	7,498	4,823	2,675	2,122	419	1,703
North Carolina	9,597	7,572	2,025	8,411	6,983	1,428	1,186	589	597
South Carolina	3,607	2,497	1,110	3,458	2,415	1,043	149	82	67
Virginia	10,629	6,653	3,976	10,051	6,300	3,751	578	353	225
West Virginia	2,018	1,104	914	1,612	1,043	569	406	61	345
East South Central	18,864	12,218	6,646	16,168	11,023	5,145	2,696	1,195	1,501
Alabama	5,747	3,908	1,839	5,095	3,518	1,577	652	390	262
Kentucky	4,142	2,489	1,653	3,215	2,078	1,137	927	411	516
Mississippi	2,751	2,005	746	2,507	1,876	631	244	129	115
Tennessee	6,224	3,816	2,408	5,351	3,551	1,800	873	265	608
West South Central	39,983	25,599	14,384	34,826	23,598	11,228	5,157	2,001	3,156
Arkansas	1,799	1,142	657	1,112	759	353	687	383	304
Louisiana	4,877	3,736	1,141	4,348	3,532	816	529	204	325
Oklahoma	4,330	2,335	1,995	4,250	2,304	1,946	80	31	49
Texas	28,977	18,386	10,591	25,116	17,003	8,113	3,861	1,383	2,478
Mountain	25,617	18,164	7,453	25,079	17,907	7,172	538	257	281
Arizona	7,239	5,173	2,066	7,239	5,173	2,066	0	0	0
Colorado	7,542	5,343	2,199	7,542	5,343	2,199	0	0	0
Idaho	1,405	719	686	1,405	719	686	0	0	0
Montana	1,065	894	171	971	811	160	94	83	11
Nevada	1,056	683	373	762	555	207	294	128	166
New Mexico	2,737	1,863	874	2,587	1,817	770	150	46	104
Utah	3,771	2,859	912	3,771	2,859	912	0	0	0
Wyoming	802	630	172	802	630	172	0	0	0
Pacific	69,935	48,379	21,556	52,295	41,539	10,756	17,640	6,840	10,800
Alaska	580	390	190	444	346	98	136	44	92
California	57,502	38,633	18,869	41,036	32,425	8,611	16,466	6,208	10,258
Hawaii	1,857	1,539	318	1,857	1,539	318	0	0	0
Oregon	3,651	2,898	753	3,588	2,866	722	63	32	31
Washington	6,345	4,919	1,426	5,370	4,363	1,007	975	556	419
Outlying Areas	2,377	1,608	769	2,377	1,608	769	0	0	0

SOURCE: National Science Foundation, SRS

Table A-5. Full-time science/engineering graduate students in all institutions by field, level of study, citizenship, sex, and type of control: 1989

Field	Total	Level of study		Citizenship		Sex		Type of control	
		First year	Beyond first year	U.S.	Foreign	Men	Women	Public	Private
Total, all surveyed fields	286,619	86,222	200,397	200,028	86,591	184,689	101,930	205,742	80,877
Total, science/engineering fields	259,575	75,654	183,921	176,266	83,309	176,472	83,103	184,824	74,751
Engineering, total	64,580	19,918	44,662	34,357	30,223	56,369	8,211	46,665	17,915
Aerospace	2,718	982	1,736	1,703	1,015	2,538	180	2,071	647
Agricultural	851	202	649	361	490	782	69	801	50
Biomedical	1,611	449	1,162	1,035	576	1,221	390	1,001	610
Chemical	5,265	1,338	3,927	2,677	2,588	4,469	796	3,689	1,576
Civil	10,168	3,502	6,666	5,262	4,906	8,464	1,704	7,866	2,302
Electrical	18,359	5,673	12,686	9,751	8,608	16,562	1,797	12,692	5,667
Engineering science	1,274	331	943	756	518	1,135	139	535	739
Industrial	4,773	1,766	3,007	2,496	2,277	3,850	923	3,681	1,092
Mechanical	10,394	3,311	7,083	5,594	4,800	9,543	851	7,627	2,767
Metallurgical/materials	3,687	892	2,795	1,871	1,816	3,059	628	2,426	1,261
Mining	355	84	271	157	198	311	44	300	55
Nuclear	1,112	292	820	628	484	993	119	906	206
Petroleum	506	88	418	207	299	486	20	418	88
Engineering, n.e.c.	3,507	1,008	2,499	1,859	1,648	2,956	551	2,652	855
Sciences, total	194,995	55,736	139,259	141,909	53,086	120,103	74,892	138,159	56,836
Physical sciences	29,164	6,837	22,327	18,048	11,116	22,505	6,659	21,047	8,117
Astronomy	762	160	602	604	158	626	136	494	268
Chemistry	16,261	3,852	12,409	10,550	5,711	11,408	4,853	11,954	4,307
Physics	12,007	2,778	9,229	6,792	5,215	10,393	1,614	8,466	3,541
Physical sciences, n.e.c.	134	47	87	102	32	78	56	133	1
Earth, atmospheric, and ocean sciences	10,088	2,679	7,409	7,777	2,311	7,304	2,784	8,317	1,771
Atmospheric sciences	810	211	599	576	234	648	162	799	11
Geosciences	5,939	1,452	4,487	4,668	1,271	4,506	1,433	4,744	1,195
Oceanography	1,790	443	1,347	1,276	514	1,216	574	1,496	294
Earth, atm. & oc. sci., n.e.c.	1,549	573	976	1,257	292	934	615	1,278	271
Mathematical sciences	13,792	4,277	9,515	7,853	5,939	9,824	3,968	10,795	2,997
Computer sciences	16,026	5,734	10,292	8,996	7,030	12,693	3,333	10,841	5,185
Agricultural sciences	8,945	2,311	6,634	6,397	2,548	6,438	2,507	8,632	313
Biological sciences	41,012	10,087	30,925	30,973	10,039	23,160	17,852	30,032	10,980
Anatomy	1,030	243	787	809	221	579	451	710	320
Biochemistry	4,912	1,078	3,834	3,423	1,489	2,955	1,957	3,303	1,609
Biology	9,359	2,497	6,862	7,641	1,718	5,375	3,984	6,733	2,626
Biometry/epidemiology	1,178	446	732	875	303	540	638	668	510
Biophysics	610	125	485	402	208	464	146	339	271
Botany	2,585	568	2,017	1,717	868	1,587	998	2,352	233
Cell biology	2,153	490	1,663	1,682	471	1,243	910	1,193	960
Ecology	879	155	724	745	134	536	343	800	79
Entomology/parasitology	1,009	199	810	718	291	693	316	944	65
Genetics	1,283	307	976	983	300	639	644	892	391
Microbiology	4,358	981	3,377	3,305	1,053	2,360	1,998	3,214	1,144
Nutrition	2,881	834	2,047	1,883	998	992	1,889	2,411	470
Pathology	1,169	270	899	877	292	716	453	833	336
Pharmacology	2,214	483	1,731	1,699	515	1,265	949	1,519	695
Physiology	2,057	590	1,467	1,517	540	1,234	823	1,399	658
Zoology	1,774	423	1,351	1,505	269	1,090	684	1,661	113
Biosciences, n.e.c.	1,561	398	1,163	1,192	369	892	669	1,061	500
Psychology	30,221	9,085	21,136	28,874	1,347	10,736	19,485	17,887	12,334
Social sciences	45,747	14,726	31,021	32,991	12,756	27,443	18,304	30,608	15,139
Agricultural economics	1,912	612	1,300	1,038	874	1,419	493	1,801	111
Anthropology	4,412	1,058	3,354	3,771	641	1,884	2,528	3,073	1,339
Economics (except agricultural)	9,195	2,570	6,625	4,708	4,487	6,831	2,364	5,829	3,366
Geography	2,351	749	1,602	1,924	427	1,556	795	2,185	166
History and philosophy of science	283	72	211	240	43	178	105	128	155
Linguistics	2,468	655	1,813	1,456	1,012	1,076	1,392	1,651	817
Political science	14,155	5,290	8,865	11,433	2,722	8,852	5,303	8,379	5,776
Sociology	5,271	1,467	3,804	3,895	1,376	2,505	2,766	3,813	1,458
Sociology/anthropology	633	204	429	499	134	297	336	482	151
Social sciences, n.e.c.	5,067	2,049	3,018	4,027	1,040	2,845	2,222	3,267	1,800
Total, health fields	27,044	10,568	16,476	23,762	3,282	8,217	18,827	20,918	6,126
Dentistry	1,008	419	589	838	170	720	288	803	205
Neurology	668	169	499	567	101	398	270	388	280
Nursing	5,987	2,233	3,754	5,817	170	445	5,542	4,865	1,122
Pharmaceutical sciences	2,015	518	1,497	1,123	892	1,215	800	1,694	321
Preventive medicine/community health	4,206	2,021	2,185	3,333	873	1,694	2,512	3,026	1,180
Speech pathology/audiology	5,849	2,422	3,427	5,573	276	626	5,223	5,031	818
Veterinary sciences	668	153	515	479	189	400	268	585	83
Clinical medicine, n.e.c.	1,433	529	904	1,185	248	798	635	963	470
Health related, n.e.c.	5,210	2,104	3,106	4,847	363	1,921	3,289	3,563	1,647

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-6. Full-time science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1989

Field	Total	U.S. citizens						Foreign
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	286,619	7,698	670	11,085	7,136	164,077	9,362	86,591
Total, science/engineering fields	259,575	6,616	557	10,169	6,030	144,356	8,538	83,309
Engineering, total	64,580	960	65	3,382	1,021	26,171	2,758	30,223
Aerospace	2,718	24	3	99	40	1,497	40	1,015
Agricultural	851	4	0	16	6	319	16	490
Biomedical	1,611	21	2	73	26	887	26	576
Chemical	5,265	60	5	184	93	2,236	99	2,588
Civil	10,168	159	14	362	169	4,317	241	4,906
Electrical	18,359	320	19	1,358	299	6,883	872	8,608
Engineering science	1,274	7	2	40	9	680	18	518
Industrial	4,773	107	8	218	119	1,845	199	2,277
Mechanical	10,394	120	6	512	120	3,863	973	4,800
Metallurgical/materials	3,687	28	2	212	35	1,555	39	1,816
Mining	355	3	0	14	2	132	6	198
Nuclear	1,112	8	1	35	24	553	7	484
Petroleum	506	3	0	14	11	176	3	299
Engineering, n.e.c.	3,507	96	3	245	68	1,228	219	1,648
Sciences, total	194,995	5,656	492	6,787	5,009	118,185	5,780	53,086
Physical sciences	29,164	479	39	1,000	580	15,221	729	11,116
Astronomy	762	6	0	36	13	533	16	158
Chemistry	16,261	327	22	589	397	8,774	441	5,711
Physics	12,007	142	17	369	166	5,836	262	5,215
Physical sciences, n.e.c.	134	4	0	6	4	78	10	32
Earth, atmospheric, and ocean sciences	10,088	66	21	162	167	7,115	246	2,311
Atmospheric sciences	810	7	0	42	8	513	6	234
Geosciences	5,939	28	15	73	79	4,289	184	1,271
Oceanography	1,790	16	0	25	61	1,144	30	514
Earth, atm. & oc. sci., n.e.c.	1,549	15	6	22	19	1,169	26	292
Mathematical sciences	13,792	259	20	487	224	6,394	469	5,939
Computer sciences	16,026	344	17	1,116	199	6,476	844	7,030
Agricultural sciences	8,945	123	18	225	251	5,561	219	2,548
Biological sciences	41,012	895	74	1,829	987	26,314	874	10,039
Anatomy	1,030	26	4	48	20	707	4	221
Biochemistry	4,912	67	6	296	70	2,932	52	1,489
Biology	9,359	289	18	380	371	6,255	328	1,718
Biometry/epidemiology	1,178	56	4	67	43	702	3	303
Biophysics	610	3	1	58	7	327	6	208
Botany	2,585	29	10	78	35	1,498	67	868
Cell biology	2,153	21	5	92	54	1,492	18	471
Ecology	879	9	1	6	16	696	17	134
Entomology/parasitology	1,009	16	1	37	24	626	14	291
Genetics	1,283	18	2	44	14	882	23	300
Microbiology	4,358	72	4	199	104	2,792	134	1,053
Nutrition	2,881	60	5	109	49	1,577	83	998
Pathology	1,169	24	1	47	16	774	15	292
Pharmacology	2,214	56	5	133	46	1,428	31	515
Physiology	2,057	57	4	132	32	1,264	28	540
Zoology	1,774	37	2	30	35	1,362	39	269
Biosciences, n.e.c.	1,561	55	1	73	51	1,000	12	369
Psychology	30,221	1,228	129	640	1,265	24,589	1,023	1,347
Social sciences	45,747	2,262	174	1,328	1,336	26,515	1,376	12,756
Agricultural economics	1,912	48	3	54	50	872	11	874
Anthropology	4,412	90	39	91	133	3,299	119	641
Economics (except agricultural)	9,195	193	24	335	177	3,759	220	4,487
Geography	2,351	29	8	42	41	1,725	79	427
History and philosophy of science	283	3	0	13	2	205	17	43
Linguistics	2,468	71	9	69	73	1,167	67	1,012
Political science	14,155	953	38	407	483	8,938	614	2,722
Sociology	5,271	344	26	156	154	3,116	99	1,376
Sociology/anthropology	633	55	1	10	13	391	29	134
Social sciences, n.e.c.	5,067	476	26	151	210	3,043	121	1,040
Total, health fields	27,044	1,082	113	916	1,106	19,721	824	3,282
Dentistry	1,008	24	1	55	20	689	49	170
Neurology	668	12	1	44	16	487	7	101
Nursing	5,987	311	22	166	254	4,967	97	170
Pharmaceutical sciences	2,015	46	8	68	46	864	91	892
Preventive medicine/community health	4,206	200	33	195	286	2,409	210	873
Speech pathology/audiology	5,849	222	18	107	169	4,919	138	276
Veterinary sciences	668	23	2	18	10	424	2	189
Clinical medicine, n.e.c.	1,433	38	5	96	46	922	78	248
Health related, n.e.c.	5,210	206	23	167	259	4,040	152	363

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-7. Part-time science/engineering graduate students in all institutions by field, sex, and type of control: 1989

Field	Total	Sex		Type of control	
		Men	Women	Public	Private
Total, all surveyed fields	154,364	87,484	66,880	101,361	53,003
Total, science/engineering fields	127,032	82,868	44,164	82,400	44,632
Engineering, total	40,342	34,790	5,552	24,456	15,886
Aerospace	787	722	65	513	274
Agricultural	180	162	18	180	0
Biomedical	308	229	79	207	101
Chemical	1,146	918	228	781	365
Civil	4,905	4,123	782	3,631	1,274
Electrical	14,947	13,256	1,691	7,596	7,351
Engineering science	818	709	109	737	81
Industrial	6,977	5,669	1,308	3,767	3,210
Mechanical	5,790	5,237	553	3,450	2,340
Metallurgical/materials	859	693	166	440	419
Mining	94	88	6	89	5
Nuclear	211	189	22	201	10
Petroleum	159	151	8	113	46
Engineering, n.e.c.	3,161	2,644	517	2,751	410
Sciences, total	86,690	48,078	38,612	57,944	28,746
Physical sciences	4,420	3,291	1,129	3,233	1,187
Astronomy	27	23	4	22	5
Chemistry	2,545	1,749	796	1,731	814
Physics	1,620	1,367	253	1,272	348
Physical sciences, n.e.c.	228	152	76	208	20
Earth, atmospheric, and ocean sciences	3,724	2,583	1,141	3,257	467
Atmospheric sciences	102	86	16	84	18
Geosciences	2,104	1,559	545	1,919	185
Oceanography	408	262	146	345	63
Earth, atm. & oc. sci., n.e.c.	1,110	676	434	909	201
Mathematical sciences	5,681	3,584	2,097	4,294	1,387
Computer sciences	16,888	12,185	4,703	8,486	8,402
Agricultural sciences	2,094	1,458	636	2,078	16
Biological sciences	8,650	3,974	4,676	6,682	1,968
Anatomy	79	40	39	59	20
Biochemistry	257	158	99	183	74
Biology	3,629	1,813	1,816	2,850	779
Biometry/epidemiology	499	184	315	292	207
Biophysics	45	29	16	43	2
Botany	413	267	146	387	26
Cell biology	62	35	27	62	0
Ecology	230	125	105	174	56
Entomology/parasitology	172	124	48	171	1
Genetics	82	36	46	44	38
Microbiology	499	230	269	404	95
Nutrition	1,396	261	1,135	1,106	290
Pathology	283	127	156	162	121
Pharmacology	135	84	51	105	30
Physiology	149	79	70	116	33
Zoology	315	206	109	301	14
Biosciences, n.e.c.	405	176	229	223	182
Psychology	16,027	5,230	10,797	9,047	6,980
Social sciences	29,206	15,773	13,433	20,867	8,339
Agricultural economics	364	275	89	364	0
Anthropology	1,742	680	1,062	1,430	312
Economics (except agricultural)	3,096	2,126	970	1,973	1,123
Geography	1,153	752	401	1,133	20
History and philosophy of science	31	20	11	26	5
Linguistics	887	269	618	675	212
Political science	15,166	8,378	6,788	10,229	4,937
Sociology	2,081	878	1,203	1,689	392
Sociology/anthropology	389	157	232	242	147
Social sciences, n.e.c.	4,297	2,238	2,059	3,106	1,191
Total, health fields	27,332	4,616	22,716	18,961	8,371
Dentistry	149	93	56	95	54
Neurology	22	13	9	14	8
Nursing	13,895	628	13,267	10,183	3,712
Pharmaceutical sciences	756	418	338	401	355
Preventive medicine/community health	3,538	1,218	2,320	2,051	1,487
Speech pathology/audiology	2,420	213	2,207	1,885	535
Veterinary sciences	133	70	63	133	0
Clinical medicine, n.e.c.	449	156	293	328	121
Health related, n.e.c.	5,970	1,807	4,163	3,871	2,099

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-8. Part-time science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1989

Field	Total	U.S. citizens						Foreign
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	154,364	6,451	409	6,433	4,369	110,288	11,190	15,224
Total, science/engineering fields	127,032	5,128	306	5,888	3,529	88,083	9,511	14,587
Engineering, total	40,342	697	59	2,693	713	25,788	3,950	6,442
Aerospace	787	3	2	46	9	546	98	83
Agricultural	180	2	0	2	1	117	2	56
Biomedical	308	4	1	16	5	215	5	62
Chemical	1,146	19	5	64	18	829	31	180
Civil	4,905	93	8	274	123	3,181	254	972
Electrical	14,947	239	18	1,300	254	8,802	1,934	2,400
Engineering science	818	18	3	55	6	599	11	126
Industrial	6,977	185	9	260	134	5,198	490	701
Mechanical	5,790	80	7	332	94	3,702	619	956
Metallurgical/materials	859	6	3	60	18	608	53	111
Mining	94	0	0	3	0	68	2	21
Nuclear	211	4	1	1	4	170	0	31
Petroleum	159	3	0	8	4	119	0	25
Engineering, n.e.c.	3,161	41	2	272	43	1,634	451	718
Sciences, total	86,690	4,431	247	3,195	2,816	62,295	5,561	8,145
Physical sciences	4,420	124	5	160	100	3,106	244	681
Astronomy	27	0	0	0	0	20	1	6
Chemistry	2,545	83	3	116	67	1,741	160	375
Physics	1,620	31	2	43	28	1,157	76	283
Physical sciences, n.e.c.	228	10	0	1	5	188	7	17
Earth, atmospheric, and ocean sciences	3,724	29	6	46	42	3,135	187	279
Atmospheric sciences	102	0	0	3	0	82	3	14
Geosciences	2,104	14	4	20	27	1,790	122	127
Oceanography	408	5	0	5	7	326	24	41
Earth, atm. & oc. sci., n.e.c.	1,110	10	2	18	8	937	38	97
Mathematical sciences	5,681	210	14	287	84	3,828	572	686
Computer sciences	16,888	498	25	1,625	347	10,269	1,486	2,638
Agricultural sciences	2,094	28	6	25	42	1,665	63	265
Biological sciences	8,650	329	16	260	239	6,583	429	794
Anatomy	79	3	0	3	1	62	4	6
Biochemistry	257	3	0	19	12	154	11	58
Biology	3,629	153	6	106	117	2,755	258	234
Biometry/epidemiology	499	28	2	17	15	384	1	52
Biophysics	45	1	0	3	1	40	0	0
Botany	413	12	0	6	6	304	10	75
Cell biology	62	0	0	1	0	50	1	10
Ecology	230	5	0	2	2	187	21	13
Entomology/parasitology	172	0	0	4	6	126	2	34
Genetics	82	8	0	2	2	60	3	7
Microbiology	499	8	3	13	12	361	39	63
Nutrition	1,396	64	2	57	40	1,063	30	140
Pathology	283	20	0	7	5	220	14	17
Pharmacology	135	5	0	5	2	97	6	20
Physiology	149	4	0	2	4	122	4	13
Zoology	315	5	3	2	3	249	20	33
Biosciences, n.e.c.	405	10	0	11	11	349	5	19
Psychology	16,027	828	53	181	510	13,194	966	295
Social sciences	29,206	2,385	122	611	1,452	20,515	1,614	2,507
Agricultural economics	364	15	0	4	9	218	4	114
Anthropology	1,742	28	14	26	39	1,347	175	113
Economics (except agricultural)	3,096	115	44	97	89	1,789	265	697
Geography	1,153	43	3	19	17	947	59	65
History and philosophy of science	31	0	0	2	1	27	0	1
Linguistics	887	85	1	14	64	535	23	165
Political science	15,166	1,433	46	335	909	10,810	806	827
Sociology	2,081	160	7	43	93	1,418	95	265
Sociology/anthropology	389	43	0	1	7	299	10	29
Social sciences, n.e.c.	4,297	463	7	70	224	3,125	177	231
Total, health fields	27,332	1,323	103	545	840	22,205	1,679	637
Dentistry	149	5	0	5	3	122	0	14
Neurology	22	0	0	0	1	16	1	4
Nursing	13,895	611	56	233	239	12,278	371	107
Pharmaceutical sciences	756	22	0	27	37	478	86	106
Preventive medicine/community health	3,538	195	12	111	240	2,393	408	179
Speech pathology/audiology	2,420	144	2	36	98	1,925	151	64
Veterinary sciences	133	3	0	0	0	103	16	11
Clinical medicine, n.e.c.	449	20	0	27	9	348	15	30
Health related, n.e.c.	5,970	323	33	106	213	4,542	631	122

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-9. Science/engineering graduate students in historically black colleges and universities by field, highest degree granted, and enrollment status: 1989

Field	All institutions			Doctorate-granting			Master's-granting		
	Total	Full time	Part time	Total	Full time	Part time	Total	Full time	Part time
Total, all surveyed fields	3,429	2,091	1,338	1,281	884	397	2,148	1,207	941
Total, science/engineering fields	3,228	1,941	1,287	1,182	796	386	2,046	1,145	901
Engineering, total	425	326	99	133	96	37	292	230	62
Aerospace	0	0	0	0	0	0	0	0	0
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	0	0	0	0	0	0	0	0	0
Chemical	0	0	0	0	0	0	0	0	0
Civil	72	57	15	62	51	11	10	6	4
Electrical	129	104	25	45	23	22	84	81	3
Engineering science	0	0	0	0	0	0	0	0	0
Industrial	26	19	7	0	0	0	26	19	7
Mechanical	72	64	8	18	18	0	54	46	8
Metallurgical/materials	0	0	0	0	0	0	0	0	0
Mining	0	0	0	0	0	0	0	0	0
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	0	0	0	0	0	0	0	0	0
Engineering, n.e.c.	126	82	44	8	4	4	118	78	40
Sciences, total	2,803	1,615	1,188	1,049	700	349	1,754	915	839
Physical sciences	306	217	89	91	79	12	215	138	77
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	203	141	62	63	52	11	140	89	51
Physics	94	74	20	28	27	1	66	47	19
Physical sciences, n.e.c.	9	2	7	0	0	0	9	2	7
Earth, atmospheric, and ocean sciences	27	17	10	26	16	10	1	1	0
Atmospheric sciences	0	0	0	0	0	0	0	0	0
Geosciences	2	2	0	1	1	0	1	1	0
Oceanography	25	15	10	25	15	10	0	0	0
Earth, atm. & oc. sci., n.e.c.	0	0	0	0	0	0	0	0	0
Mathematical sciences	255	160	95	116	92	24	139	68	71
Computer sciences	290	169	121	85	44	41	205	125	80
Agricultural sciences	66	45	21	0	0	0	66	45	21
Biological sciences	447	339	108	179	160	19	268	179	89
Anatomy	9	9	0	9	9	0	0	0	0
Biochemistry	15	15	0	15	15	0	0	0	0
Biology	206	129	77	28	25	3	178	104	74
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	43	31	12	21	10	11	22	21	1
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	0	0	0	0	0	0	0	0	0
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	26	22	4	26	22	4	0	0	0
Microbiology	8	8	0	8	8	0	0	0	0
Nutrition	44	34	10	0	0	0	44	34	10
Pathology	0	0	0	0	0	0	0	0	0
Pharmacology	8	8	0	8	8	0	0	0	0
Physiology	24	23	1	24	23	1	0	0	0
Zoology	22	22	0	22	22	0	0	0	0
Biosciences, n.e.c.	42	38	4	18	18	0	24	20	4
Psychology	375	162	213	37	27	10	338	135	203
Social sciences	1,037	506	531	515	282	233	522	224	298
Agricultural economics	49	27	22	0	0	0	49	27	22
Anthropology	0	0	0	0	0	0	0	0	0
Economics (except agricultural)	99	63	36	88	54	34	11	9	2
Geography	0	0	0	0	0	0	0	0	0
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	137	60	77	137	60	77	0	0	0
Political science	212	81	131	106	50	56	106	31	75
Sociology	180	107	73	48	16	32	132	91	41
Sociology/anthropology	58	37	21	54	35	19	4	2	2
Social sciences, n.e.c.	302	131	171	82	67	15	220	64	156
Total, health fields	201	150	51	99	88	11	102	62	40
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0	0	0
Nursing	41	24	17	0	0	0	41	24	17
Pharmaceutical sciences	42	31	11	42	31	11	0	0	0
Preventive medicine/community health	0	0	0	0	0	0	0	0	0
Speech pathology/audiology	42	19	23	0	0	0	42	19	23
Veterinary sciences	19	19	0	0	0	0	19	19	0
Clinical medicine, n.e.c.	57	57	0	57	57	0	0	0	0
Health related, n.e.c.	0	0	0	0	0	0	0	0	0

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-10. Science/engineering graduate students in historically black colleges and universities by field, type of control, sex, and level of department: 1989

Field	Total	Type of control		Sex		Level of department	
		Public	Private	Men	Women	Doctorate	Master's
Total, all surveyed fields	3,429	2,407	1,022	2,008	1,421	773	2,656
Total, science/engineering fields	3,228	2,366	862	1,932	1,296	731	2,497
Engineering, total	425	282	143	362	63	63	362
Aerospace	0	0	0	0	0	0	0
Agricultural	0	0	0	0	0	0	0
Biomedical	0	0	0	0	0	0	0
Chemical	0	0	0	0	0	0	0
Civil	72	30	42	55	17	0	72
Electrical	129	61	68	113	16	45	84
Engineering science	0	0	0	0	0	0	0
Industrial	26	26	0	17	9	0	26
Mechanical	72	39	33	66	6	18	54
Metallurgical/materials	0	0	0	0	0	0	0
Mining	0	0	0	0	0	0	0
Nuclear	0	0	0	0	0	0	0
Petroleum	0	0	0	0	0	0	0
Engineering, n.e.c.	126	126	0	111	15	0	126
Sciences, total	2,803	2,084	719	1,570	1,233	668	2,135
Physical sciences	306	219	87	218	88	76	230
Astronomy	0	0	0	0	0	0	0
Chemistry	203	151	52	136	67	63	140
Physics	94	59	35	80	14	13	81
Physical sciences, n.e.c.	9	9	0	2	7	0	9
Earth, atmospheric, and ocean sciences	27	26	1	15	12	25	2
Atmospheric sciences	0	0	0	0	0	0	0
Geosciences	2	1	1	2	0	0	2
Oceanography	25	25	0	13	12	25	0
Earth, atm. & oc. sci., n.e.c.	0	0	0	0	0	0	0
Mathematical sciences	255	234	21	163	92	13	242
Computer sciences	290	242	48	183	107	0	290
Agricultural sciences	66	35	31	57	9	0	66
Biological sciences	447	256	191	207	240	158	289
Anatomy	9	0	9	3	6	9	0
Biochemistry	15	0	15	13	2	15	0
Biology	206	181	25	93	113	28	178
Biometry/epidemiology	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0
Botany	43	22	21	22	21	0	43
Cell biology	0	0	0	0	0	0	0
Ecology	0	0	0	0	0	0	0
Entomology/parasitology	0	0	0	0	0	0	0
Genetics	26	0	26	8	18	26	0
Microbiology	8	0	8	4	4	8	0
Nutrition	44	29	15	24	20	0	44
Pathology	0	0	0	0	0	0	0
Pharmacology	8	0	8	2	6	8	0
Physiology	24	0	24	15	9	24	0
Zoology	22	0	22	10	12	22	0
Biosciences, n.e.c.	42	24	18	13	29	18	24
Psychology	375	347	28	135	240	21	354
Social sciences	1,037	725	312	592	445	375	662
Agricultural economics	49	49	0	42	7	0	49
Anthropology	0	0	0	0	0	0	0
Economics (except agricultural)	99	40	59	74	25	59	40
Geography	0	0	0	0	0	0	0
History and philosophy of science	0	0	0	0	0	0	0
Linguistics	137	0	137	54	83	137	0
Political science	212	188	24	156	56	91	121
Sociology	180	135	45	85	95	45	135
Sociology/anthropology	58	11	47	19	39	43	15
Social sciences, n.e.c.	302	302	0	162	140	0	302
Total, health fields	201	41	160	76	125	42	159
Dentistry	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0
Nursing	41	0	41	1	40	0	41
Pharmaceutical sciences	42	23	19	25	17	42	0
Preventive medicine/community health	0	0	0	0	0	0	0
Speech pathology/audiology	42	18	24	0	42	0	42
Veterinary sciences	19	0	19	15	4	0	19
Clinical medicine, n.e.c.	57	0	57	35	22	0	57
Health related, n.e.c.	0	0	0	0	0	0	0

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-11. Science/engineering graduate students in historically black colleges and universities by field, citizenship, and racial/ethnic background: 1989

Field	Total	U.S. citizens						Foreign
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	3,429	1,674	5	151	32	487	104	976
Total, science/engineering fields	3,228	1,583	5	141	27	410	100	962
Engineering, total	425	148	0	30	4	44	4	195
Aerospace	0	0	0	0	0	0	0	0
Agricultural	0	0	0	0	0	0	0	0
Biomedical	0	0	0	0	0	0	0	0
Chemical	0	0	0	0	0	0	0	0
Civil	72	38	0	1	3	16	0	14
Electrical	129	59	0	4	0	5	4	57
Engineering science	0	0	0	0	0	0	0	0
Industrial	26	11	0	1	0	5	0	9
Mechanical	72	18	0	13	0	6	0	35
Metallurgical/materials	0	0	0	0	0	0	0	0
Mining	0	0	0	0	0	0	0	0
Nuclear	0	0	0	0	0	0	0	0
Petroleum	0	0	0	0	0	0	0	0
Engineering, n.e.c.	126	22	0	11	1	12	0	80
Sciences, total	2,803	1,435	5	111	23	366	96	767
Physical sciences	306	149	1	21	0	19	6	110
Astronomy	0	0	0	0	0	0	0	0
Chemistry	203	91	0	17	0	14	5	76
Physics	94	50	1	3	0	5	1	34
Physical sciences, n.e.c.	9	8	0	1	0	0	0	0
Earth, atmospheric, and ocean sciences	27	3	0	0	0	18	0	6
Atmospheric sciences	0	0	0	0	0	0	0	0
Geosciences	2	0	0	0	0	1	0	1
Oceanography	25	3	0	0	0	17	0	5
Earth, atm. & oc. sci., n.e.c.	0	0	0	0	0	0	0	0
Mathematical sciences	255	107	2	20	1	17	13	95
Computer sciences	290	123	0	44	3	29	25	66
Agricultural sciences	66	10	0	0	0	5	0	51
Biological sciences	447	273	0	13	7	33	7	114
Anatomy	9	8	0	0	1	0	0	0
Biochemistry	15	4	0	2	0	0	0	9
Biology	206	151	0	5	1	14	0	35
Biometry/epidemiology	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0
Botany	43	11	0	0	1	4	0	27
Cell biology	0	0	0	0	0	0	0	0
Ecology	0	0	0	0	0	0	0	0
Entomology/parasitology	0	0	0	0	0	0	0	0
Genetics	26	11	0	1	0	3	4	7
Microbiology	8	8	0	0	0	0	0	0
Nutrition	44	9	0	1	1	8	2	23
Pathology	0	0	0	0	0	0	0	0
Pharmacology	8	6	0	0	0	0	0	2
Physiology	24	15	0	0	0	0	0	9
Zoology	22	18	0	3	1	0	0	0
Biosciences, n.e.c.	42	32	0	1	2	4	1	2
Psychology	375	237	1	3	7	91	16	20
Social sciences	1,037	533	1	10	5	154	29	305
Agricultural economics	49	12	0	0	0	1	0	36
Anthropology	0	0	0	0	0	0	0	0
Economics (except agricultural)	99	33	0	4	1	0	0	61
Geography	0	0	0	0	0	0	0	0
History and philosophy of science	0	0	0	0	0	0	0	0
Linguistics	137	95	0	0	0	0	0	42
Political science	212	101	0	0	0	24	15	72
Sociology	180	113	1	2	3	8	3	50
Sociology/anthropology	58	44	0	0	0	0	0	14
Social sciences, n.e.c.	302	135	0	4	1	121	11	30
Total, health fields	201	91	0	10	5	77	4	14
Dentistry	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0	0
Nursing	41	20	0	2	0	17	0	2
Pharmaceutical sciences	42	22	0	4	2	6	0	8
Preventive medicine/community health	0	0	0	0	0	0	0	0
Speech pathology/audiology	42	32	0	1	1	4	4	0
Veterinary sciences	19	12	0	2	0	1	0	4
Clinical medicine, n.e.c.	57	5	0	1	2	49	0	0
Health related, n.e.c.	0	0	0	0	0	0	0	0

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-12. Science/engineering graduate students in land-grant institutions by field, highest degree granted, and enrollment status: 1989

Field	All institutions			Doctorate-granting			Master's-granting		
	Total	Full time	Part time	Total	Full time	Part time	Total	Full time	Part time
Total, all surveyed fields	137,989	109,469	28,520	136,452	108,702	27,750	1,537	767	770
Total, science/engineering fields	126,301	101,749	24,552	124,782	100,986	23,796	1,519	763	756
Engineering, total	36,152	27,938	8,214	35,844	27,733	8,111	308	205	103
Aerospace	1,253	1,047	206	1,253	1,047	206	0	0	0
Agricultural	922	757	165	922	757	165	0	0	0
Biomedical	542	419	123	542	419	123	0	0	0
Chemical	2,787	2,512	275	2,787	2,512	275	0	0	0
Civil	6,047	4,956	1,091	6,037	4,950	1,087	10	6	4
Electrical	10,012	7,409	2,603	9,951	7,351	2,600	61	58	3
Engineering science	910	426	484	910	426	484	0	0	0
Industrial	3,139	1,683	1,456	3,113	1,664	1,449	26	19	7
Mechanical	5,971	4,899	1,072	5,932	4,868	1,064	39	31	8
Metallurgical/materials	1,960	1,782	178	1,960	1,782	178	0	0	0
Mining	242	188	54	242	188	54	0	0	0
Nuclear	906	754	152	906	754	152	0	0	0
Petroleum	212	197	15	212	197	15	0	0	0
Engineering, n.e.c.	1,249	909	340	1,077	818	259	172	91	81
Sciences, total	90,149	73,811	16,338	88,938	73,253	15,685	1,211	558	653
Physical sciences	13,077	12,100	977	12,957	12,023	934	120	77	43
Astronomy	306	303	3	306	303	3	0	0	0
Chemistry	7,345	6,788	557	7,269	6,740	529	76	48	28
Physics	5,393	4,983	410	5,349	4,954	395	44	29	15
Physical sciences, n.e.c.	33	26	7	33	26	7	0	0	0
Earth, atmospheric, and ocean sciences	5,738	4,512	1,226	5,737	4,511	1,226	1	1	0
Atmospheric sciences	574	516	58	574	516	58	0	0	0
Geosciences	3,053	2,433	620	3,052	2,432	620	1	1	0
Oceanography	1,204	1,034	170	1,204	1,034	170	0	0	0
Earth, atm. & oc. sci., n.e.c.	907	529	378	907	529	378	0	0	0
Mathematical sciences	6,786	5,933	853	6,716	5,902	814	70	31	39
Computer sciences	6,586	4,823	1,763	6,422	4,735	1,687	164	88	76
Agricultural sciences	8,730	7,281	1,449	8,695	7,260	1,435	35	21	14
Biological sciences	19,855	17,600	2,255	19,739	17,508	2,231	116	92	24
Anatomy	353	329	24	353	329	24	0	0	0
Biochemistry	2,216	2,135	81	2,216	2,135	81	0	0	0
Biology	2,681	2,334	347	2,625	2,297	328	56	37	19
Biometry/epidemiology	158	145	13	158	145	13	0	0	0
Biophysics	209	203	6	209	203	6	0	0	0
Botany	2,439	2,121	318	2,417	2,100	317	22	21	1
Cell biology	873	824	49	873	824	49	0	0	0
Ecology	636	582	54	636	582	54	0	0	0
Entomology/parasitology	1,029	895	134	1,029	895	134	0	0	0
Genetics	605	579	26	605	579	26	0	0	0
Microbiology	2,111	1,860	251	2,111	1,860	251	0	0	0
Nutrition	2,601	2,066	535	2,572	2,037	535	29	29	0
Pathology	515	451	64	515	451	64	0	0	0
Pharmacology	938	876	62	938	876	62	0	0	0
Physiology	843	788	55	843	788	55	0	0	0
Zoology	1,291	1,116	175	1,291	1,116	175	0	0	0
Biosciences, n.e.c.	357	296	61	348	291	57	9	5	4
Psychology	7,845	5,972	1,873	7,522	5,858	1,664	323	114	209
Social sciences	21,532	15,590	5,942	21,150	15,456	5,694	382	134	248
Agricultural economics	2,087	1,737	350	2,038	1,710	328	49	27	22
Anthropology	1,654	1,279	375	1,654	1,279	375	0	0	0
Economics (except agricultural)	3,876	3,188	688	3,876	3,188	688	0	0	0
Geography	1,294	984	310	1,294	984	310	0	0	0
History and philosophy of science	87	72	15	87	72	15	0	0	0
Linguistics	874	770	104	874	770	104	0	0	0
Political science	6,043	3,482	2,561	5,940	3,460	2,480	103	22	81
Sociology	2,478	1,948	530	2,432	1,902	530	46	46	0
Sociology/anthropology	373	275	98	373	275	98	0	0	0
Social sciences, n.e.c.	2,766	1,855	911	2,582	1,816	766	184	39	145
Total, health fields	11,688	7,720	3,968	11,670	7,716	3,954	18	4	14
Dentistry	239	213	26	239	213	26	0	0	0
Neurology	184	172	12	184	172	12	0	0	0
Nursing	4,197	1,862	2,335	4,197	1,862	2,335	0	0	0
Pharmaceutical sciences	919	784	135	919	784	135	0	0	0
Preventive medicine/community health	2,238	1,613	625	2,238	1,613	625	0	0	0
Speech pathology/audiology	1,636	1,334	302	1,618	1,330	288	18	4	14
Veterinary sciences	733	616	117	733	616	117	0	0	0
Clinical medicine, n.e.c.	455	400	55	455	400	55	0	0	0
Health related, n.e.c.	1,087	726	361	1,087	726	361	0	0	0

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-13. Science/engineering graduate students in land-grant institutions by field, citizenship, and racial/ethnic background: 1989

Field	Total	U.S. citizens						Foreign
		Black non-Hispanic	American Indian/ Alaskan Native	Asian/ Pacific Islander	Hispanic	White non-Hispanic	Other or unknown	
Total, all surveyed fields	137,989	3,346	353	5,075	4,286	81,737	3,321	39,871
Total, science/engineering fields	126,301	2,945	286	4,602	3,406	73,335	3,095	38,632
Engineering, total	36,152	523	44	1,826	521	17,748	926	14,564
Aerospace	1,253	9	0	42	13	715	2	472
Agricultural	922	5	0	16	6	374	7	514
Biomedical	542	6	2	31	11	318	11	163
Chemical	2,787	32	3	98	49	1,315	25	1,265
Civil	6,047	84	9	177	93	3,013	99	2,572
Electrical	10,012	176	11	764	150	4,687	283	3,941
Engineering science	910	17	4	56	8	662	12	151
Industrial	3,139	67	5	92	59	1,883	53	980
Mechanical	5,971	69	7	304	71	2,604	345	2,571
Metallurgical/materials	1,960	16	1	82	23	916	16	906
Mining	242	0	0	14	0	97	4	127
Nuclear	906	6	1	31	22	492	1	353
Petroleum	212	0	0	2	5	104	0	101
Engineering, n.e.c.	1,249	36	1	117	11	568	68	448
Sciences, total	90,149	2,422	242	2,776	2,885	55,587	2,169	24,068
Physical sciences	13,077	216	27	377	346	7,261	448	4,402
Astronomy	306	1	0	12	7	227	6	53
Chemistry	7,345	138	14	215	248	4,084	332	2,314
Physics	5,393	75	13	150	91	2,923	110	2,031
Physical sciences, n.e.c.	33	2	0	0	0	27	0	4
Earth, atmospheric, and ocean sciences	5,738	30	16	93	101	4,025	191	1,282
Atmospheric sciences	574	4	0	37	4	357	4	168
Geosciences	3,053	11	9	19	28	2,232	154	600
Oceanography	1,204	9	0	21	57	764	22	331
Earth, atm. & oc. sci. n.e.c.	907	6	7	16	12	672	11	183
Mathematical sciences	6,786	131	7	177	142	3,284	184	2,861
Computer sciences	6,586	128	9	294	63	3,340	252	2,500
Agricultural sciences	8,730	109	18	200	217	5,623	202	2,361
Biological sciences	19,855	332	39	848	560	12,741	425	4,910
Anatomy	353	3	0	23	9	256	3	59
Biochemistry	2,216	25	3	154	42	1,279	40	673
Biology	2,681	78	6	111	195	1,845	35	411
Biometry/epidemiology	158	4	0	17	22	83	2	30
Biophysics	209	0	1	22	5	132	2	47
Botany	2,439	29	8	83	34	1,417	76	792
Cell biology	873	9	2	37	30	604	12	179
Ecology	636	7	1	6	6	515	14	87
Entomology/parasitology	1,029	14	1	41	27	654	14	278
Genetics	605	2	1	26	7	379	19	171
Microbiology	2,111	32	3	61	70	1,420	41	484
Nutrition	2,601	49	2	97	29	1,412	65	947
Pathology	515	19	1	13	6	350	13	113
Pharmacology	938	21	3	58	27	598	22	209
Physiology	843	10	4	64	22	544	16	183
Zoology	1,291	20	3	26	26	981	44	191
Biosciences, n.e.c.	357	10	0	9	3	272	7	56
Psychology	7,845	414	54	228	417	6,210	75	447
Social sciences	21,532	1,062	72	559	1,039	13,103	392	5,305
Agricultural economics	2,087	61	2	57	54	1,002	15	896
Anthropology	1,654	31	15	32	44	1,277	20	235
Economics (except agricultural)	3,876	89	2	103	126	1,881	44	1,631
Geography	1,294	12	4	28	22	975	35	218
History and philosophy of science	87	0	0	4	1	65	1	16
Linguistics	874	10	6	35	37	391	9	386
Political science	6,043	409	12	143	469	4,119	161	730
Sociology	2,478	141	18	70	91	1,520	63	575
Sociology/anthropology	373	20	0	3	3	234	12	101
Social sciences, n.e.c.	2,766	289	13	84	192	1,639	32	517
Total, health fields	11,688	401	67	473	880	8,402	226	1,239
Dentistry	239	5	0	6	4	180	0	44
Neurology	184	3	1	16	6	128	1	29
Nursing	4,197	156	24	123	176	3,557	60	101
Pharmaceutical sciences	919	25	1	32	53	453	15	340
Preventive medicine/community health	2,238	94	28	166	386	1,214	52	298
Speech pathology/audiology	1,636	72	5	52	80	1,290	43	94
Veterinary sciences	733	14	2	16	10	493	18	180
Clinical medicine, n.e.c.	455	7	3	40	19	304	10	72
Health related, n.e.c.	1,087	25	3	22	146	783	27	81

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-14. Science/engineering graduate students in land-grant institutions by geographic distribution, highest degree granted, and enrollment status: 1989

Division and State	All institutions			Doctorate-granting			Master's-granting		
	Total	Full time	Part time	Total	Full time	Part time	Total	Full time	Part time
Total, all institutions	137,989	109,469	28,520	136,452	108,702	27,750	1,537	767	770
New England	10,359	7,740	2,619	10,359	7,740	2,619	0	0	0
Connecticut	0	0	0	0	0	0	0	0	0
Maine	667	505	162	667	505	162	0	0	0
Massachusetts	7,162	5,479	1,683	7,162	5,479	1,683	0	0	0
New Hampshire	634	435	199	634	435	199	0	0	0
Rhode Island	1,278	860	418	1,278	860	418	0	0	0
Vermont	618	461	157	618	461	157	0	0	0
Middle Atlantic	12,077	8,802	3,275	12,077	8,802	3,275	0	0	0
New Jersey	4,093	2,025	2,068	4,093	2,025	2,068	0	0	0
New York	3,636	3,636	0	3,636	3,636	0	0	0	0
Pennsylvania	4,348	3,141	1,207	4,348	3,141	1,207	0	0	0
East North Central	25,662	22,151	3,511	25,662	22,151	3,511	0	0	0
Illinois	7,836	6,559	1,277	7,836	6,559	1,277	0	0	0
Indiana	4,040	3,686	354	4,040	3,686	354	0	0	0
Michigan	3,051	2,555	496	3,051	2,555	496	0	0	0
Ohio	5,164	4,435	729	5,164	4,435	729	0	0	0
Wisconsin	5,571	4,916	655	5,571	4,916	655	0	0	0
West North Central	15,771	11,573	4,198	15,643	11,562	4,081	128	11	117
Iowa	2,680	2,225	455	2,680	2,225	455	0	0	0
Kansas	1,533	1,308	225	1,533	1,308	225	0	0	0
Minnesota	5,607	4,697	910	5,607	4,697	910	0	0	0
Missouri	4,423	2,429	1,994	4,295	2,418	1,877	128	11	117
Nebraska	473	108	365	473	108	365	0	0	0
North Dakota	618	513	105	618	513	105	0	0	0
South Dakota	437	293	144	437	293	144	0	0	0
South Atlantic	19,583	13,837	5,746	19,110	13,544	5,566	473	293	180
Delaware	1,236	880	356	1,218	878	340	18	2	16
District of Columbia	62	27	35	0	0	0	62	27	35
Florida	1,565	1,176	389	1,565	1,176	389	0	0	0
Georgia	1,567	1,327	240	1,501	1,314	187	66	13	53
Maryland	5,616	3,187	2,429	5,616	3,187	2,429	0	0	0
North Carolina	3,394	2,704	690	3,114	2,484	630	280	220	60
South Carolina	1,458	1,158	300	1,458	1,158	300	0	0	0
Virginia	3,289	2,444	845	3,242	2,413	829	47	31	16
West Virginia	1,396	934	462	1,396	934	462	0	0	0
East South Central	8,084	5,670	2,414	7,409	5,357	2,052	675	313	362
Alabama	1,702	1,419	283	1,496	1,258	238	206	161	45
Kentucky	1,878	1,442	436	1,878	1,442	436	0	0	0
Mississippi	1,090	842	248	1,090	842	248	0	0	0
Tennessee	3,414	1,967	1,447	2,945	1,815	1,130	469	152	317
West South Central	9,866	7,377	2,489	9,605	7,227	2,378	261	150	111
Arkansas	940	679	261	940	679	261	0	0	0
Louisiana	2,478	1,964	514	2,340	1,913	427	138	51	87
Oklahoma	1,690	707	983	1,690	707	983	0	0	0
Texas	4,758	4,027	731	4,635	3,928	707	123	99	24
Mountain	10,480	8,096	2,384	10,480	8,096	2,384	0	0	0
Arizona	3,474	2,867	607	3,474	2,867	607	0	0	0
Colorado	1,864	1,397	467	1,864	1,397	467	0	0	0
Idaho	960	505	455	960	505	455	0	0	0
Montana	515	459	56	515	459	56	0	0	0
Nevada	762	555	207	762	555	207	0	0	0
New Mexico	856	598	258	856	598	258	0	0	0
Utah	1,247	1,085	162	1,247	1,085	162	0	0	0
Wyoming	802	630	172	802	630	172	0	0	0
Pacific	24,026	22,845	1,181	24,026	22,845	1,181	0	0	0
Alaska	444	346	98	444	346	98	0	0	0
California	18,773	18,262	511	18,773	18,262	511	0	0	0
Hawaii	1,857	1,539	318	1,857	1,539	318	0	0	0
Oregon	1,761	1,613	148	1,761	1,613	148	0	0	0
Washington	1,191	1,085	106	1,191	1,085	106	0	0	0
Outlying Areas	2,081	1,378	703	2,081	1,378	703	0	0	0

SOURCE: National Science Foundation, SRS

Table A-15. Science/engineering postdoctorates in doctorate-granting institutions by field, source of support, and citizenship: 1989

Field	Total	Source of support					Number of foreign post-doctorates
		Federal				Non-Federal	
		Total	Fellowships	Trainee-ships	Research grants		
Total, all surveyed fields	28,157	19,688	2,699	2,550	14,439	8,469	13,113
Total, science/engineering fields	21,230	15,530	1,858	1,224	12,448	5,700	10,308
Engineering, total	1,879	1,187	72	18	1,097	692	1,232
Aerospace	38	35	1	1	33	3	24
Agricultural	38	21	1	0	20	17	27
Biomedical	67	51	1	10	40	16	38
Chemical	438	256	13	0	243	182	331
Civil	182	102	4	0	98	80	102
Electrical	193	151	5	0	146	42	135
Engineering science	74	62	2	0	60	12	46
Industrial	38	20	0	0	20	18	15
Mechanical	302	201	32	4	165	101	202
Metallurgical/materials	323	219	13	1	205	104	237
Mining	90	8	0	2	6	82	10
Nuclear	36	24	0	0	24	12	23
Petroleum	9	3	0	0	3	6	7
Engineering, n.e.c.	51	34	0	0	34	17	35
Sciences, total	19,351	14,343	1,786	1,206	11,351	5,008	9,076
Physical sciences	5,332	4,276	288	25	3,963	1,056	3,075
Astronomy	186	166	27	0	139	20	77
Chemistry	3,473	2,716	204	25	2,487	757	2,117
Physics	1,644	1,371	57	0	1,314	273	875
Physical sciences, n.e.c.	29	23	0	0	23	6	6
Earth, atmospheric, and ocean sciences	486	411	14	0	397	75	195
Atmospheric sciences	58	55	2	0	53	3	23
Geosciences	293	241	8	0	233	52	128
Oceanography	115	101	4	0	97	14	34
Earth, atm. & oc. sci., n.e.c.	20	14	0	0	14	6	10
Mathematical sciences	223	141	38	4	99	82	129
Computer sciences	78	62	4	0	58	16	36
Agricultural sciences	483	280	24	1	255	203	195
Biological sciences	11,830	8,625	1,292	1,032	6,301	3,205	5,227
Anatomy	504	401	66	40	295	103	199
Biochemistry	2,254	1,684	223	131	1,330	570	1,072
Biology	1,290	1,016	224	34	758	274	418
Biometry/epidemiology	104	75	9	54	12	29	40
Biophysics	143	101	5	9	87	42	74
Botany	480	301	21	6	274	179	177
Cell biology	983	692	121	60	511	291	426
Ecology	52	45	2	0	43	7	13
Entomology/parasitology	219	157	14	12	131	62	89
Genetics	535	339	80	68	191	196	207
Microbiology	1,539	1,093	164	159	770	446	692
Nutrition	130	58	2	10	46	72	82
Pathology	912	620	84	155	381	292	439
Pharmacology	1,179	905	75	151	679	274	609
Physiology	1,077	823	151	117	555	254	502
Zoology	214	156	49	6	101	58	55
Biosciences, n.e.c.	215	159	2	20	137	56	133
Psychology	538	379	59	110	210	159	102
Social sciences	381	169	67	34	68	212	117
Agricultural economics	28	16	1	0	15	12	11
Anthropology	74	22	7	3	12	52	19
Economics (except agricultural)	33	10	7	1	2	23	15
Geography	22	19	15	0	4	3	3
History and philosophy of science	12	3	2	0	1	9	5
Linguistics	30	7	2	0	5	23	20
Political science	41	26	21	0	5	15	13
Sociology	83	42	3	30	9	41	20
Sociology/anthropology	0	0	0	0	0	0	0
Social sciences, n.e.c.	58	24	9	0	15	34	11
Total, health fields	6,927	4,158	841	1,326	1,991	2,769	2,805
Dentistry	43	29	7	4	18	14	34
Neurology	453	296	78	68	150	157	199
Nursing	36	22	13	2	7	14	1
Pharmaceutical sciences	416	302	13	11	278	114	274
Preventive medicine/community health	192	135	22	48	65	57	72
Speech pathology/audiology	28	23	4	6	13	5	7
Veterinary sciences	111	64	5	3	56	47	32
Clinical medicine, n.e.c.	5,507	3,189	690	1,159	1,340	2,318	2,132
Health related, n.e.c.	141	98	9	25	64	43	54

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table A-16. Science/engineering postdoctorates and other nonfaculty doctoral research staff in doctorate-granting institutions by field and sex: 1989

Field	Postdoctorates			Other nonfaculty doctoral research staff		
	Total	Men	Women	Total	Men	Women
Total, all surveyed fields	28,157	20,678	7,479	4,929	3,644	1,285
Total, science/engineering fields	21,230	15,793	5,437	4,043	3,069	974
Engineering, total	1,879	1,702	177	580	526	54
Aerospace	38	35	3	14	7	7
Agricultural	38	30	8	19	16	3
Biomedical	67	63	4	18	15	3
Chemical	438	392	46	75	69	6
Civil	182	153	29	37	34	3
Electrical	193	180	13	114	108	6
Engineering science	74	68	6	19	16	3
Industrial	38	30	8	5	4	1
Mechanical	302	288	14	89	81	8
Metallurgical/materials	323	287	36	120	107	13
Mining	90	90	0	6	6	0
Nuclear	36	32	4	38	37	1
Petroleum	9	9	0	1	1	0
Engineering, n.e.c.	51	45	6	25	25	0
Sciences, total	19,351	14,091	5,260	3,463	2,543	920
Physical sciences	5,332	4,584	748	961	846	115
Astronomy	186	160	26	68	61	7
Chemistry	3,473	2,889	584	446	368	78
Physics	1,644	1,510	134	446	416	30
Physical sciences, n.e.c.	29	25	4	1	1	0
Earth, atmospheric, and ocean sciences	486	411	75	250	197	53
Atmospheric sciences	58	56	2	10	9	1
Geosciences	293	248	45	142	112	30
Oceanography	115	91	24	81	63	18
Earth, atm. & oc. sci., n.e.c.	20	16	4	17	13	4
Mathematical sciences	223	195	28	64	59	5
Computer sciences	78	64	14	68	56	12
Agricultural sciences	483	366	117	136	107	29
Biological sciences	11,830	7,900	3,930	1,721	1,139	582
Anatomy	504	321	183	81	64	17
Biochemistry	2,254	1,543	711	369	236	133
Biology	1,290	850	440	242	159	83
Biometry/epidemiology	104	63	41	19	12	7
Biophysics	143	110	33	20	13	7
Botany	480	332	148	86	54	32
Cell biology	983	624	359	163	108	55
Ecology	52	44	8	31	18	13
Entomology/parasitology	219	170	49	36	27	9
Genetics	535	348	187	53	26	27
Microbiology	1,539	1,007	532	120	76	44
Nutrition	130	84	46	63	48	15
Pathology	912	597	315	103	72	31
Pharmacology	1,179	783	396	129	91	38
Physiology	1,077	739	338	172	124	48
Zoology	214	141	73	28	8	20
Biosciences, n.e.c.	215	144	71	6	3	3
Psychology	538	327	211	182	93	89
Social sciences	381	244	137	81	46	35
Agricultural economics	28	21	7	6	2	4
Anthropology	74	45	29	30	13	17
Economics (except agricultural)	33	30	3	0	0	0
Geography	22	13	9	4	4	0
History and philosophy of science	12	10	2	3	3	0
Linguistics	30	18	12	8	5	3
Political science	41	27	14	15	11	4
Sociology	83	46	37	5	3	2
Sociology/anthropology	0	0	0	0	0	0
Social sciences, n.e.c.	58	34	24	10	5	5
Total, health fields	6,927	4,885	2,042	886	575	311
Dentistry	43	24	19	10	3	7
Neurology	453	330	123	105	81	24
Nursing	36	4	32	3	0	3
Pharmaceutical sciences	416	305	111	32	26	6
Preventive medicine/community health	192	121	71	45	27	18
Speech pathology/audiology	28	15	13	20	6	14
Veterinary sciences	111	68	43	28	21	7
Clinical medicine, n.e.c.	5,507	3,929	1,578	623	400	223
Health related, n.e.c.	141	89	52	20	11	9

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-1. Total enrollment in all institutions of higher education by level and field: 1975-89

Year	Total	Graduate enrollment						Under-graduate enroll-ment	First-pro-fessional enroll-ment
		Total all fields	NSF fields	Sciences	Engi-neering	Health fields	Non-S/E		
	Total, all U. S. institutions								
1975	11,290,719	1,423,277	329,658	235,229	68,360	26,069	1,093,619	9,623,484	243,958
1976	11,121,626	1,258,302	334,760	239,196	66,771	28,793	923,542	9,617,211	246,113
1977	11,415,020	1,264,082	347,056	243,518	69,142	34,396	917,026	9,898,039	252,899
1978 1/	11,391,950	1,265,961	330,293	225,072	68,661	36,560	935,668	9,867,493	258,496
1979	11,707,126	1,261,093	359,994	248,477	72,262	39,255	901,099	10,181,040	264,993
1980	12,234,644	1,293,697	369,893	252,449	75,084	42,360	923,804	10,661,150	279,797
1981	12,517,753	1,349,572	378,104	253,580	80,479	44,045	971,468	10,891,663	276,518
1982	12,588,520	1,329,644	385,056	256,197	84,594	44,265	944,588	10,978,407	280,469
1983	12,633,930	1,347,973	394,048	257,646	91,952	44,450	953,925	11,005,261	280,696
1984 1/	12,400,392	1,353,554	398,178	258,416	93,659	46,103	955,376	10,766,018	280,820
1985 1/	12,411,945	1,384,862	407,942	263,776	96,968	47,198	976,920	10,749,752	277,331
1986 1/	12,670,121	1,444,369	419,338	267,512	103,093	48,733	1,025,031	10,952,167	273,585
1987 1/	12,925,116	1,461,239	425,358	270,955	104,717	49,686	1,035,881	11,193,098	270,779
1988	13,206,559	1,481,459	429,831	274,513	103,816	51,502	1,051,628	11,454,955	270,145
1989 2/	13,655,244	1,496,306	440,983	281,685	104,922	54,376	1,055,323	11,886,059	272,878
	Subtotal, 50 States and D.C.								
1975	11,184,859	1,418,616	328,192	234,127	68,306	25,759	1,090,424	9,523,976	242,267
1976	11,012,337	1,253,240	333,346	238,012	66,729	28,605	919,894	9,514,605	244,492
1977	11,285,787	1,258,157	345,450	242,173	69,024	34,253	912,707	9,776,273	251,357
1978 1/	11,260,092	1,260,998	328,690	223,677	68,592	36,421	932,308	9,742,190	256,904
1979	11,569,899	1,255,676	358,414	247,081	72,212	39,121	897,262	10,050,819	263,404
1980	12,096,895	1,287,497	367,889	250,649	75,036	42,204	919,608	10,531,631	277,767
1981	12,371,672	1,342,555	376,087	251,759	80,413	43,915	966,468	10,754,522	274,595
1982	12,425,780	1,322,293	382,913	254,318	84,533	44,062	939,380	10,825,062	278,425
1983	12,464,661	1,340,137	391,630	255,513	91,890	44,227	948,507	10,845,995	278,529
1984 1/	12,241,940	1,345,271	395,599	256,162	93,574	45,863	949,672	10,618,071	278,598
1985 1/	12,247,055	1,376,181	405,268	261,408	96,866	46,994	970,913	10,596,674	274,200
1986 1/	12,504,501	1,435,288	416,593	265,049	102,983	48,561	1,018,695	10,798,800	270,413
1987 1/	12,768,307	1,451,938	422,654	268,544	104,639	49,471	1,029,284	11,047,902	268,467
1988	13,043,118	1,471,862	427,324	272,785	103,695	50,844	1,044,538	11,304,160	267,096
1989 2/	13,486,619	1,486,201	438,606	280,115	104,814	53,677	1,047,595	11,730,720	269,698
	Outlying areas								
1975	105,860	4,661	1,466	1,102	54	310	3,195	99,508	1,691
1976	109,289	5,062	1,414	1,184	42	188	3,648	102,606	1,621
1977	129,233	5,925	1,606	1,345	118	143	4,319	121,766	1,542
1978 1/	131,858	4,963	1,603	1,395	69	139	3,360	125,303	1,592
1979	137,227	5,417	1,580	1,396	50	134	3,837	130,221	1,589
1980	137,749	6,200	2,004	1,800	48	156	4,196	129,519	2,030
1981	146,081	7,017	2,017	1,821	66	130	5,000	137,141	1,923
1982	162,740	7,351	2,143	1,879	61	203	5,208	153,345	2,044
1983	169,269	7,836	2,418	2,133	62	223	5,418	159,266	2,167
1984 1/	158,452	8,283	2,579	2,254	85	240	5,704	147,947	2,222
1985 1/	164,890	8,681	2,674	2,368	102	204	6,007	153,078	3,131
1986 1/	165,620	9,081	2,745	2,463	110	172	6,336	153,367	3,172
1987 1/	156,809	9,301	2,704	2,411	78	215	6,597	145,196	2,312
1988	163,441	9,597	2,507	1,728	121	658	7,090	150,795	3,049
1989 2/	168,625	10,105	2,377	1,570	108	699	7,728	155,339	3,180

1/ Graduate S/E enrollment data for 1978 and 1984 through 1987 include estimates for master's-granting institutions.

2/ NCES data for 1989 represent preliminary estimates based on a sample of 642 institutions.

SOURCES: U. S. Department of Education, NCES, and National Science Foundation, SRS

Table B-2. Science/engineering graduate students in all institutions by enrollment status and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmos-pheric and ocean sciences	Mathe-matical sciences	Computer sciences	Agri-cultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	329,658	235,229	26,310	12,289	16,918	8,415	10,578	46,577	36,201	77,941
1976	334,760	239,196	26,631	13,034	17,092	8,627	11,154	47,932	37,469	77,257
1977	347,056	243,518	26,855	13,658	16,069	9,108	11,520	49,556	38,628	78,124
1978 1/.....	345,187	239,966	26,379	13,484	15,077	9,925	11,753	48,600	38,188	76,560
1979	359,994	248,477	26,700	13,854	15,063	11,690	12,069	48,503	39,786	80,812
1980	369,893	252,449	26,952	14,208	15,360	13,578	12,254	47,890	40,636	81,571
1981	378,104	253,580	27,382	14,422	15,915	16,437	12,100	46,979	40,691	79,654
1982	385,056	256,197	28,199	15,174	17,199	19,812	12,314	46,310	40,098	77,091
1983	394,048	257,646	29,466	15,544	17,397	23,616	12,290	46,055	41,039	72,239
1984 2/.....	398,178	258,416	30,064	15,612	17,478	25,810	12,062	46,171	41,074	70,145
1985 2/.....	407,942	263,776	30,995	15,545	17,613	29,844	11,380	46,538	41,308	70,553
1986 2/.....	419,338	267,512	32,260	15,163	17,990	31,425	11,329	47,216	41,551	70,578
1987 2/.....	425,358	270,955	32,738	14,522	18,602	32,137	11,004	47,401	42,785	71,766
1988	429,831	274,513	32,972	14,032	19,193	32,787	11,000	48,273	44,277	71,979
1989	440,983	281,685	33,584	13,812	19,473	32,914	11,039	49,662	46,248	74,953
	Full time									
1975	220,489	164,968	21,916	9,677	10,695	4,473	8,758	37,047	24,109	48,293
1976	224,115	168,320	22,252	10,219	10,952	4,748	9,317	38,087	25,649	47,096
1977	227,862	169,639	22,505	10,556	10,365	4,604	9,567	38,603	25,710	47,729
1978 1/.....	225,072	165,537	22,158	10,511	9,804	4,926	9,598	38,122	24,963	45,455
1979	233,089	169,558	22,535	10,724	9,668	5,853	9,794	38,218	25,865	46,901
1980	239,855	172,247	22,918	10,969	9,902	6,587	9,980	37,928	26,692	47,271
1981	243,671	172,831	23,308	11,038	10,154	7,445	10,076	37,582	26,725	46,503
1982	246,218	172,605	24,040	11,436	10,823	9,171	9,891	36,989	25,818	44,437
1983	253,735	176,294	25,205	12,049	10,964	10,687	9,836	37,112	26,701	43,740
1984 2/.....	255,597	176,691	25,852	11,819	11,319	11,587	9,750	37,480	26,108	42,776
1985 2/.....	259,467	179,322	26,669	11,439	11,833	14,101	9,097	37,362	25,769	43,052
1986 2/.....	268,404	183,800	27,764	11,323	12,398	15,310	9,229	38,178	26,521	43,077
1987 2/.....	273,434	186,501	28,414	10,543	13,068	15,572	8,983	38,776	27,426	43,719
1988	278,167	189,271	28,574	10,296	13,554	15,596	8,986	39,764	28,412	44,089
1989	286,619	194,995	29,164	10,088	13,792	16,026	8,945	41,012	30,221	45,747
	Part time									
1975	109,169	70,261	4,394	2,612	6,223	3,942	1,820	9,530	12,092	29,648
1976	110,645	70,876	4,379	2,815	6,140	3,879	1,837	9,845	11,820	30,161
1977	119,194	73,879	4,350	3,102	5,704	4,504	1,953	10,953	12,918	30,395
1978 1/.....	120,115	74,429	4,221	2,973	5,273	4,999	2,155	10,478	13,225	31,105
1979	126,905	78,919	4,165	3,130	5,395	5,837	2,275	10,285	13,921	33,911
1980	130,038	80,202	4,034	3,239	5,458	6,991	2,274	9,962	13,944	34,300
1981	134,433	80,749	4,074	3,384	5,761	8,992	2,024	9,397	13,966	33,151
1982	138,838	83,592	4,159	3,738	6,376	10,641	2,423	9,321	14,280	32,654
1983	140,313	81,352	4,261	3,495	6,433	12,929	2,454	8,943	14,338	28,499
1984 2/.....	142,581	81,725	4,212	3,793	6,159	14,223	2,312	8,691	14,966	27,369
1985 2/.....	148,475	84,454	4,326	4,106	5,780	15,743	2,283	9,176	15,539	27,501
1986 2/.....	150,934	83,712	4,496	3,840	5,592	16,115	2,100	9,038	15,030	27,501
1987 2/.....	151,924	84,454	4,324	3,979	5,534	16,565	2,021	8,625	15,359	28,047
1988	151,664	85,242	4,398	3,736	5,639	17,191	2,014	8,509	15,865	27,890
1989	154,364	86,690	4,420	3,724	5,681	16,888	2,094	8,650	16,027	29,206

See footnotes at end of table.

Table B-2. Science/engineering graduate students in all institutions by enrollment status and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	68,360	1,670	5,336	12,560	16,320	11,663	8,601	2,352	9,858	26,069
1976	66,771	1,477	5,581	12,016	15,926	10,687	8,313	2,375	10,396	28,793
1977	69,142	1,518	5,580	12,712	17,406	10,438	8,722	2,559	10,207	34,396
1978 1/......	68,661	1,460	5,751	12,771	17,365	9,569	8,704	2,569	10,472	36,560
1979	72,262	1,481	6,029	13,217	17,789	10,714	9,251	2,756	11,025	39,255
1980	75,084	1,737	6,518	13,502	19,227	9,870	9,888	2,910	11,432	42,360
1981	80,479	1,883	7,017	14,515	20,193	10,026	10,618	3,125	13,102	44,045
1982	84,594	1,941	7,775	14,523	22,017	9,870	11,467	3,124	13,877	44,265
1983	91,952	2,408	8,300	15,314	25,213	9,621	12,911	3,447	14,738	44,450
1984 2/......	93,659	2,445	8,117	15,584	26,306	9,820	13,855	3,657	13,875	46,103
1985 2/......	96,968	2,658	7,932	15,265	28,128	11,104	14,157	3,938	13,786	47,198
1986 2/......	103,093	2,924	7,759	15,379	30,008	12,160	15,740	4,170	14,953	48,733
1987 2/......	104,717	3,121	7,929	14,957	31,339	12,750	16,304	4,309	14,008	49,686
1988	103,816	3,318	7,360	15,077	31,960	11,940	16,233	4,272	13,656	51,502
1989	104,922	3,505	7,076	15,073	33,306	11,750	16,184	4,546	13,482	54,376
	Full time									
1975	37,813	1,245	3,743	7,363	8,278	4,152	4,931	1,787	6,314	17,708
1976	36,964	1,165	4,014	7,039	8,147	3,578	4,919	1,860	6,242	18,831
1977	37,565	1,187	4,174	7,451	8,528	3,343	4,883	1,951	6,048	20,658
1978 1/......	37,913	1,138	4,258	7,673	8,512	3,256	4,952	1,973	6,151	21,622
1979	40,393	1,152	4,555	8,013	9,039	3,743	5,428	2,135	6,328	23,138
1980	43,107	1,327	4,863	8,343	9,963	3,772	5,841	2,254	6,744	24,501
1981	46,257	1,483	5,382	9,208	10,450	3,642	6,422	2,454	7,216	24,583
1982	50,239	1,522	6,084	9,768	11,533	3,831	7,267	2,478	7,756	23,374
1983	54,327	1,840	6,489	10,191	13,203	3,334	8,330	2,704	8,236	23,114
1984 2/......	55,539	1,854	6,348	10,466	13,857	3,438	8,698	2,872	8,006	23,367
1985 2/......	56,293	1,994	6,123	10,102	14,752	3,530	8,875	3,088	7,829	23,852
1986 2/......	60,726	2,154	6,166	10,370	16,322	3,889	9,801	3,347	8,677	23,878
1987 2/......	62,229	2,372	6,318	9,884	17,040	4,261	10,175	3,397	8,782	24,704
1988	63,478	2,533	5,958	10,198	17,653	4,406	10,438	3,421	8,871	25,418
1989	64,580	2,718	5,771	10,168	18,359	4,773	10,394	3,687	8,710	27,044
	Part time									
1975	30,547	425	1,593	5,197	8,042	7,511	3,670	565	3,544	8,361
1976	29,807	312	1,567	4,977	7,779	7,109	3,394	515	4,154	9,962
1977	31,577	331	1,406	5,261	8,878	7,095	3,839	608	4,159	13,738
1978 1/......	30,748	322	1,493	5,098	8,863	6,313	3,752	596	4,321	14,938
1979	31,869	329	1,474	5,204	8,750	6,971	3,823	621	4,697	16,117
1980	31,977	410	1,655	5,159	9,264	6,098	4,047	656	4,688	17,859
1981	34,222	400	1,635	5,307	9,743	6,384	4,196	671	5,886	19,462
1982	34,355	419	1,691	4,755	10,484	6,039	4,200	646	6,121	20,891
1983	37,625	568	1,811	5,123	12,010	6,287	4,581	743	6,502	21,336
1984 2/......	38,120	591	1,769	5,118	12,449	6,382	5,157	785	5,869	22,736
1985 2/......	40,675	664	1,809	5,163	13,376	7,574	5,282	850	5,957	23,346
1986 2/......	42,367	770	1,593	5,009	13,686	8,271	5,939	823	6,276	24,855
1987 2/......	42,488	749	1,611	5,073	14,299	8,489	6,129	912	5,226	24,982
1988	40,338	785	1,402	4,879	14,307	7,534	5,795	851	4,785	26,084
1989	40,342	787	1,305	4,905	14,947	6,977	5,790	859	4,772	27,332

1/ Master's granting-institutions were not surveyed in 1978; totals include estimates based on 1977 and 1979 data.

2/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

SOURCE: National Science Foundation, SRS

Table B-3. Science/engineering graduate students in all institutions by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	329,658	235,229	26,310	12,289	16,918	8,415	10,578	46,577	36,201	77,941
1976	334,760	239,196	26,631	13,034	17,092	8,627	11,154	47,932	37,469	77,257
1977	347,056	243,518	26,855	13,658	16,069	9,108	11,520	49,556	38,628	78,124
1978 1/	345,187	239,966	26,379	13,484	15,077	9,925	11,753	48,600	38,188	76,560
1979	359,994	248,477	26,700	13,854	15,063	11,690	12,069	48,503	39,786	80,812
1980	369,893	252,449	26,952	14,208	15,360	13,578	12,254	47,890	40,636	81,571
1981	378,104	253,580	27,382	14,422	15,915	16,437	12,100	46,979	40,691	79,654
1982	385,056	256,197	28,199	15,174	17,199	19,812	12,314	46,310	40,098	77,091
1983	394,048	257,646	29,466	15,544	17,397	23,616	12,290	46,055	41,039	72,239
1984 2/	398,178	258,416	30,064	15,612	17,478	25,810	12,062	46,171	41,074	70,145
1985 2/	407,942	263,776	30,995	15,545	17,613	29,844	11,380	46,538	41,308	70,553
1986 2/	419,338	267,512	32,260	15,163	17,990	31,425	11,329	47,216	41,551	70,578
1987 2/	425,358	270,955	32,738	14,522	18,602	32,137	11,004	47,401	42,785	71,766
1988	429,831	274,513	32,972	14,032	19,193	32,787	11,000	48,273	44,277	71,979
1989	440,983	281,685	33,584	13,812	19,473	32,914	11,039	49,662	46,248	74,953
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	245,910	169,110	22,816	11,307	11,944	7,549	9,453	32,712	20,520	52,809
1978 1/	238,381	162,969	22,176	10,910	11,129	8,090	9,438	31,330	19,445	50,451
1979	242,408	164,735	22,205	10,925	11,027	9,367	9,461	30,499	19,427	51,824
1980	244,876	164,172	22,352	10,940	11,272	10,491	9,447	29,492	19,036	51,142
1981	245,377	161,056	22,366	10,945	11,419	12,228	9,370	28,210	17,902	48,616
1982	247,962	161,030	22,776	11,393	12,109	14,366	9,314	27,021	16,980	47,071
1983	253,112	160,297	23,586	11,593	12,184	16,968	9,183	26,572	16,687	43,524
1984 2/	254,631	160,587	23,904	11,694	12,295	18,905	8,963	26,510	16,216	42,100
1985 2/	260,378	163,467	24,483	11,571	12,227	22,387	8,422	26,482	15,778	42,117
1986 2/	266,942	164,971	25,395	11,183	12,501	23,677	8,384	26,581	15,459	41,791
1987 2/	270,076	166,136	25,620	10,708	12,957	24,233	8,061	26,700	15,708	42,149
1988	268,328	165,694	25,473	10,164	13,370	24,564	7,927	26,752	15,605	41,839
1989	272,173	168,181	25,796	9,887	13,408	24,878	7,896	27,134	15,966	43,216
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	101,146	74,408	4,039	2,351	4,125	1,559	2,067	16,844	18,108	25,315
1978 1/	106,806	76,997	4,203	2,574	3,948	1,835	2,315	17,270	18,743	26,109
1979	117,586	83,742	4,495	2,929	4,036	2,323	2,608	18,004	20,359	28,988
1980	125,017	88,277	4,600	3,268	4,088	3,087	2,807	18,398	21,600	30,429
1981	132,727	92,524	5,016	3,477	4,496	4,209	2,730	18,769	22,789	31,038
1982	137,094	95,167	5,423	3,781	5,090	5,446	3,000	19,289	23,118	30,020
1983	140,936	97,349	5,880	3,951	5,213	6,648	3,107	19,483	24,352	28,715
1984 2/	143,547	97,829	6,160	3,918	5,183	6,905	3,099	19,661	24,858	28,045
1985 2/	147,564	100,309	6,512	3,974	5,386	7,457	2,958	20,056	25,530	28,436
1986 2/	152,396	102,541	6,865	3,980	5,489	7,748	2,945	20,635	26,092	28,787
1987 2/	155,282	104,819	7,118	3,814	5,645	7,904	2,943	20,701	27,077	29,617
1988	161,503	108,819	7,499	3,868	5,823	8,223	3,073	21,521	28,672	30,140
1989	168,810	113,504	7,788	3,925	6,065	8,036	3,143	22,528	30,282	31,737

See footnotes at end of table.

Table B-3. Science/engineering graduate students in all institutions by sex and field: 1975-89
-Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	68,360	1,670	5,336	12,560	16,320	11,663	8,601	2,352	9,858	26,069
1976	66,771	1,477	5,581	12,016	15,926	10,687	8,313	2,375	10,396	28,793
1977	69,142	1,518	5,580	12,712	17,406	10,438	8,722	2,559	10,207	34,396
1978 1/.....	68,661	1,460	5,751	12,771	17,365	9,569	8,704	2,569	10,472	36,560
1979	72,262	1,481	6,029	13,217	17,789	10,714	9,251	2,756	11,025	39,255
1980	75,084	1,737	6,518	13,502	19,227	9,870	9,888	2,910	11,432	42,360
1981	80,479	1,883	7,017	14,515	20,193	10,026	10,618	3,125	13,102	44,045
1982	84,594	1,941	7,775	14,523	22,017	9,870	11,467	3,124	13,877	44,265
1983	91,952	2,408	8,300	15,314	25,213	9,621	12,911	3,447	14,738	44,450
1984 2/.....	93,659	2,445	8,117	15,584	26,306	9,820	13,855	3,657	13,875	46,103
1985 2/.....	96,968	2,658	7,932	15,265	28,128	11,104	14,157	3,938	13,786	47,198
1986 2/.....	103,093	2,924	7,759	15,379	30,008	12,160	15,740	4,170	14,953	48,733
1987 2/.....	104,717	3,121	7,929	14,957	31,339	12,750	16,304	4,309	14,008	49,686
1988	103,816	3,318	7,360	15,077	31,960	11,940	16,233	4,272	13,656	51,502
1989	104,922	3,505	7,076	15,073	33,306	11,750	16,184	4,546	13,482	54,376
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	65,307	1,485	5,192	11,752	16,696	9,683	8,449	2,376	9,674	11,493
1978 1/.....	64,009	1,421	5,255	11,598	16,564	8,685	8,358	2,346	9,782	11,403
1979	66,235	1,432	5,384	11,752	16,856	9,463	8,782	2,468	10,098	11,438
1980	68,581	1,663	5,798	11,973	18,244	8,520	9,354	2,607	10,422	12,123
1981	72,548	1,816	6,187	12,778	18,917	8,466	9,987	2,735	11,662	11,773
1982	75,621	1,831	6,832	12,614	20,466	8,216	10,748	2,704	12,210	11,311
1983	81,968	2,283	7,212	13,307	23,157	8,044	12,106	2,999	12,860	10,847
1984 2/.....	83,118	2,311	7,085	13,411	24,112	8,082	12,899	3,189	12,029	10,926
1985 2/.....	85,630	2,490	6,862	12,983	25,719	9,159	13,146	3,338	11,933	11,281
1986 2/.....	90,419	2,722	6,672	13,072	27,104	9,897	14,578	3,507	12,867	11,552
1987 2/.....	91,618	2,895	6,721	12,773	28,263	10,395	15,015	3,604	11,952	12,322
1988	90,473	3,086	6,236	12,698	28,705	9,695	14,812	3,540	11,701	12,161
1989	91,159	3,260	6,024	12,587	29,818	9,519	14,780	3,752	11,419	12,833
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	3,835	33	388	960	710	755	273	183	533	22,903
1978 1/.....	4,652	39	496	1,173	801	884	346	223	690	25,157
1979	6,027	49	645	1,465	933	1,251	469	288	927	27,817
1980	6,503	74	720	1,529	983	1,350	534	303	1,010	30,237
1981	7,931	67	830	1,737	1,276	1,560	631	390	1,440	32,272
1982	8,973	110	943	1,909	1,551	1,654	719	420	1,667	32,954
1983	9,984	125	1,088	2,007	2,056	1,577	805	448	1,878	33,603
1984 2/.....	10,541	134	1,032	2,173	2,194	1,738	956	468	1,846	35,177
1985 2/.....	11,338	168	1,070	2,282	2,409	1,945	1,011	600	1,853	35,917
1986 2/.....	12,674	202	1,087	2,307	2,904	2,263	1,162	663	2,086	37,181
1987 2/.....	13,099	226	1,208	2,184	3,076	2,355	1,289	705	2,056	37,364
1988	13,343	232	1,124	2,379	3,255	2,245	1,421	732	1,955	39,341
1989	13,763	245	1,052	2,486	3,488	2,231	1,404	794	2,063	41,543

1/ Master's-granting institutions were not surveyed and distribution by sex data were not requested in 1978; totals represent estimates based on 1977 and 1979 data.

2/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

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Table B-4. Full-time science/engineering graduate students in all institutions by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	220,489	164,968	21,916	9,677	10,695	4,473	8,758	37,047	24,109	48,293
1976	224,115	168,320	22,252	10,219	10,952	4,748	9,317	38,087	25,649	47,096
1977	227,862	169,639	22,505	10,556	10,365	4,604	9,567	38,603	25,710	47,729
1978 1/......	225,072	165,537	22,158	10,511	9,804	4,926	9,598	38,122	24,963	45,455
1979	233,089	169,558	22,535	10,724	9,668	5,853	9,794	38,218	25,865	46,901
1980	239,855	172,247	22,918	10,969	9,902	6,587	9,980	37,928	26,692	47,271
1981	243,671	172,831	23,308	11,038	10,154	7,445	10,076	37,582	26,725	46,503
1982	246,218	172,605	24,040	11,436	10,823	9,171	9,891	36,989	25,818	44,437
1983	253,735	176,294	25,205	12,049	10,964	10,687	9,836	37,112	26,701	43,740
1984 2/......	255,597	176,691	25,852	11,819	11,319	11,587	9,750	37,480	26,108	42,776
1985 2/......	259,467	179,322	26,669	11,439	11,833	14,101	9,097	37,362	25,769	43,052
1986 2/......	268,404	183,800	27,764	11,323	12,398	15,310	9,229	38,178	26,521	43,077
1987 2/......	273,434	186,501	28,414	10,543	13,068	15,572	8,983	38,776	27,426	43,719
1988	278,167	189,271	28,574	10,296	13,554	15,596	8,986	39,764	28,412	44,089
1989	286,619	194,995	29,164	10,088	13,792	16,026	8,945	41,012	30,221	45,747
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	164,131	121,524	19,205	8,551	8,476	4,006	7,843	26,309	14,594	32,540
1977	162,590	119,707	19,293	8,731	8,083	3,845	7,798	25,996	13,951	32,010
1978 1/......	157,772	115,003	18,862	8,506	7,625	4,076	7,662	25,121	13,171	29,980
1979	160,439	115,781	19,044	8,471	7,498	4,803	7,645	24,621	13,280	30,419
1980	161,769	114,676	19,215	8,451	7,595	5,184	7,644	23,968	12,788	29,831
1981	162,404	113,292	19,307	8,429	7,613	5,718	7,735	23,390	12,066	29,034
1982	164,071	112,146	19,641	8,608	8,029	6,860	7,431	22,340	11,282	27,955
1983	169,148	113,683	20,371	9,038	8,044	8,038	7,348	22,211	11,405	27,228
1984 2/......	170,014	113,768	20,755	8,929	8,332	8,825	7,216	22,253	10,756	26,702
1985 2/......	172,179	115,296	21,241	8,574	8,615	11,051	6,734	22,029	10,356	26,696
1986 2/......	177,906	117,356	22,023	8,390	8,998	11,975	6,853	22,226	10,332	26,559
1987 2/......	180,785	118,252	22,384	7,826	9,500	12,245	6,631	22,428	10,466	26,772
1988	181,332	117,975	22,208	7,506	9,821	12,197	6,539	22,770	10,291	26,643
1989	184,689	120,103	22,505	7,304	9,824	12,693	6,438	23,160	10,736	27,443
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	59,984	46,796	3,047	1,668	2,476	742	1,474	11,778	11,055	14,556
1977	65,272	49,932	3,212	1,825	2,282	759	1,769	12,607	11,759	15,719
1978 1/......	67,300	50,534	3,296	2,005	2,179	850	1,936	13,001	11,792	15,475
1979	72,650	53,777	3,491	2,253	2,170	1,050	2,149	13,597	12,585	16,482
1980	78,086	57,571	3,703	2,518	2,307	1,403	2,336	13,960	13,904	17,440
1981	81,267	59,539	4,001	2,609	2,541	1,727	2,341	14,192	14,659	17,469
1982	82,147	60,459	4,399	2,828	2,794	2,311	2,460	14,649	14,536	16,482
1983	84,587	62,611	4,834	3,011	2,920	2,649	2,488	14,901	15,296	16,512
1984 2/......	85,583	62,923	5,097	2,890	2,987	2,762	2,534	15,227	15,352	16,074
1985 2/......	87,288	64,026	5,428	2,865	3,218	3,050	2,363	15,333	15,413	16,356
1986 2/......	90,498	66,444	5,741	2,933	3,400	3,335	2,376	15,952	16,189	16,518
1987 2/......	92,649	68,249	6,030	2,717	3,568	3,327	2,352	16,348	16,960	16,947
1988	96,835	71,296	6,366	2,790	3,733	3,399	2,447	16,994	18,121	17,446
1989	101,930	74,892	6,659	2,784	3,968	3,333	2,507	17,852	19,485	18,304

See footnotes at end of table.

Table B-4. Full-time science/engineering graduate students in all institutions by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engi-neering, total	Aerospace	Chemical engi-neering	Civil engi-neering	Electrical engi-neering	Industrial engi-neering	Mechanical engi-neering	Metallur-gical & materials engi-neering	Other engi-neering	
	Total enrollment									
1975	37,813	1,245	3,743	7,363	8,278	4,152	4,931	1,787	6,314	17,708
1976	36,964	1,165	4,014	7,039	8,147	3,578	4,919	1,860	6,242	18,831
1977	37,565	1,187	4,174	7,451	8,528	3,343	4,883	1,951	6,048	20,658
1978 1/......	37,913	1,138	4,258	7,673	8,512	3,256	4,952	1,973	6,151	21,622
1979	40,393	1,152	4,555	8,013	9,039	3,743	5,428	2,135	6,328	23,138
1980	43,107	1,327	4,863	8,343	9,963	3,772	5,841	2,254	6,744	24,501
1981	46,257	1,483	5,382	9,208	10,450	3,642	6,422	2,454	7,216	24,583
1982	50,239	1,522	6,084	9,768	11,533	3,831	7,267	2,478	7,756	23,374
1983	54,327	1,840	6,489	10,191	13,203	3,334	8,330	2,704	8,236	23,114
1984 2/......	55,539	1,854	6,348	10,466	13,857	3,438	8,698	2,872	8,006	23,367
1985 2/......	56,293	1,994	6,123	10,102	14,752	3,530	8,875	3,088	7,829	23,852
1986 2/......	60,726	2,154	6,166	10,370	16,322	3,889	9,801	3,347	8,677	23,878
1987 2/......	62,229	2,372	6,318	9,884	17,040	4,261	10,175	3,397	8,782	24,704
1988	63,478	2,533	5,958	10,198	17,653	4,406	10,438	3,421	8,871	25,418
1989	64,580	2,718	5,771	10,168	18,359	4,773	10,394	3,687	8,710	27,044
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	34,932	1,142	3,771	6,520	7,850	3,199	4,797	1,751	5,902	7,675
1977	35,185	1,160	3,885	6,789	8,146	2,967	4,742	1,809	5,687	7,698
1978 1/......	35,082	1,108	3,902	6,849	8,109	2,828	4,769	1,805	5,712	7,687
1979	36,816	1,116	4,097	6,976	8,585	3,164	5,170	1,922	5,786	7,842
1980	39,091	1,273	4,371	7,287	9,405	3,105	5,525	2,023	6,102	8,002
1981	41,471	1,432	4,815	7,922	9,739	2,946	6,075	2,167	6,375	7,641
1982	44,827	1,449	5,379	8,370	10,715	3,059	6,834	2,170	6,851	7,098
1983	48,570	1,760	5,657	8,751	12,248	2,714	7,847	2,380	7,213	6,895
1984 2/......	49,350	1,768	5,564	8,885	12,711	2,806	8,137	2,518	6,961	6,896
1985 2/......	49,874	1,868	5,322	8,477	13,553	2,879	8,316	2,652	6,807	7,009
1986 2/......	53,581	2,006	5,340	8,724	14,851	3,138	9,173	2,836	7,513	6,969
1987 2/......	54,862	2,205	5,401	8,411	15,498	3,500	9,450	2,845	7,552	7,671
1988	55,744	2,365	5,135	8,551	15,979	3,642	9,602	2,858	7,612	7,613
1989	56,369	2,538	4,955	8,464	16,562	3,850	9,543	3,059	7,398	8,217
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	2,032	23	243	519	297	379	122	109	340	11,156
1977	2,380	27	289	662	382	376	141	142	361	12,960
1978 1/......	2,831	30	356	824	403	428	183	168	439	13,935
1979	3,577	36	458	1,037	454	579	258	213	542	15,296
1980	4,016	54	492	1,056	558	667	316	231	642	16,499
1981	4,786	51	567	1,286	711	696	347	287	841	16,942
1982	5,412	73	705	1,398	818	772	433	308	905	16,276
1983	5,757	80	832	1,440	955	620	483	324	1,023	16,219
1984 2/......	6,189	86	784	1,581	1,146	632	561	354	1,045	16,471
1985 2/......	6,419	126	801	1,625	1,199	651	559	436	1,022	16,843
1986 2/......	7,145	148	826	1,646	1,471	751	628	511	1,164	16,909
1987 2/......	7,367	167	917	1,473	1,542	761	725	552	1,230	17,033
1988	7,734	168	823	1,647	1,674	764	836	563	1,259	17,805
1989	8,211	180	816	1,704	1,797	923	851	628	1,312	18,827

1/ Master's-granting institutions were not surveyed and distribution by sex data were not requested in 1978; totals represent estimates based on 1977 and 1979 data.

2/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-5. Full-time science/engineering graduate students in all institutions by citizenship and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	220,489	164,968	21,916	9,677	10,695	4,473	8,758	37,047	24,109	48,293
1976	224,115	168,320	22,252	10,219	10,952	4,748	9,317	38,087	25,649	47,096
1977	227,862	169,639	22,505	10,556	10,365	4,604	9,567	38,603	25,710	47,729
1978 1/......	225,072	165,537	22,158	10,511	9,804	4,926	9,598	38,122	24,963	45,455
1979	233,089	169,558	22,535	10,724	9,668	5,853	9,794	38,218	25,865	46,901
1980	239,855	172,247	22,918	10,969	9,902	6,587	9,980	37,928	26,692	47,271
1981	243,671	172,831	23,308	11,038	10,154	7,445	10,076	37,582	26,725	46,503
1982	246,218	172,605	24,040	11,436	10,823	9,171	9,891	36,989	25,818	44,437
1983	253,735	176,294	25,205	12,049	10,964	10,687	9,836	37,112	26,701	43,740
1984 2/......	255,597	176,691	25,852	11,819	11,319	11,587	9,750	37,480	26,108	42,776
1985 2/......	259,467	179,322	26,669	11,439	11,833	14,101	9,097	37,362	25,769	43,052
1986 2/......	268,404	183,800	27,764	11,323	12,398	15,310	9,229	38,178	26,521	43,077
1987 2/......	273,434	186,501	28,414	10,543	13,068	15,572	8,983	38,776	27,426	43,719
1988	278,167	189,271	28,574	10,296	13,554	15,596	8,986	39,764	28,412	44,089
1989	286,619	194,995	29,164	10,088	13,792	16,026	8,945	41,012	30,221	45,747
	U.S. citizens									
1975 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	204,851	152,141	19,006	9,868	8,049	5,032	8,247	35,229	25,390	41,320
1980	189,345	141,788	17,174	9,570	6,648	4,521	7,754	33,340	25,482	37,299
1981	188,942	140,070	17,037	9,534	6,513	4,887	7,701	32,727	25,721	35,950
1982	188,545	138,665	17,555	9,789	6,935	5,981	7,508	31,950	24,739	34,208
1983	191,520	139,373	17,973	10,358	6,722	6,724	7,368	31,579	25,607	33,042
1984 2/......	191,833	138,583	18,250	10,224	6,781	7,052	7,329	31,660	25,063	32,224
1985 2/......	190,984	137,540	18,186	9,748	7,009	8,551	6,759	30,990	24,608	31,689
1986 2/......	192,983	138,196	18,266	9,432	7,253	9,176	6,685	30,943	25,351	31,090
1987 2/......	194,306	138,288	18,386	8,575	7,574	9,087	6,366	30,685	26,212	31,403
1988	194,196	138,064	18,090	8,116	7,777	8,776	6,376	30,681	27,082	31,166
1989	200,028	141,909	18,048	7,777	7,853	8,996	6,397	30,973	28,874	32,991
	Foreign students									
1975 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	28,238	17,417	3,529	856	1,619	821	1,547	2,989	475	5,581
1980	50,510	30,459	5,744	1,399	3,254	2,066	2,226	4,588	1,210	9,972
1981	54,729	32,761	6,271	1,504	3,641	2,558	2,375	4,855	1,004	10,553
1982	57,673	33,940	6,485	1,647	3,888	3,190	2,383	5,039	1,079	10,229
1983	62,215	36,921	7,232	1,691	4,242	3,963	2,468	5,533	1,094	10,698
1984 2/......	63,764	38,108	7,602	1,595	4,538	4,535	2,421	5,820	1,045	10,552
1985 2/......	68,483	41,782	8,483	1,691	4,824	5,550	2,338	6,372	1,161	11,363
1986 2/......	75,421	45,604	9,498	1,891	5,145	6,134	2,544	7,235	1,170	11,987
1987 2/......	79,128	48,213	10,028	1,968	5,494	6,485	2,617	8,091	1,214	12,316
1988	83,971	51,207	10,484	2,180	5,777	6,820	2,610	9,083	1,330	12,923
1989	86,591	53,086	11,116	2,311	5,939	7,030	2,548	10,039	1,347	12,756

See footnotes at end of table.

Table B-5. Full-time science/engineering graduate students in all institutions by citizenship and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	37,813	1,245	3,743	7,363	8,278	4,152	4,931	1,787	6,314	17,708
1976	36,964	1,165	4,014	7,039	8,147	3,578	4,919	1,860	6,242	18,831
1977	37,565	1,187	4,174	7,451	8,528	3,343	4,883	1,951	6,048	20,658
1978 1/......	37,913	1,138	4,258	7,673	8,512	3,256	4,952	1,973	6,151	21,622
1979	40,393	1,152	4,555	8,013	9,039	3,743	5,428	2,135	6,328	23,138
1980	43,107	1,327	4,863	8,343	9,963	3,772	5,841	2,254	6,744	24,501
1981	46,257	1,483	5,382	9,208	10,450	3,642	6,422	2,454	7,216	24,583
1982	50,239	1,522	6,084	9,768	11,533	3,831	7,267	2,478	7,756	23,374
1983	54,327	1,840	6,489	10,191	13,203	3,334	8,330	2,704	8,236	23,114
1984 2/......	55,539	1,854	6,348	10,466	13,857	3,438	8,698	2,872	8,006	23,367
1985 2/......	56,293	1,994	6,123	10,102	14,752	3,530	8,875	3,088	7,829	23,852
1986 2/......	60,726	2,154	6,166	10,370	16,322	3,889	9,801	3,347	8,677	23,878
1987 2/......	62,229	2,372	6,318	9,884	17,040	4,261	10,175	3,397	8,782	24,704
1988	63,478	2,533	5,958	10,198	17,653	4,406	10,438	3,421	8,871	25,418
1989	64,580	2,718	5,771	10,168	18,359	4,773	10,394	3,687	8,710	27,044
	U.S. citizens									
1975 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	30,827	822	3,300	6,194	7,291	2,849	3,889	1,462	5,020	21,883
1980	25,108	759	2,660	4,968	5,666	2,316	3,211	1,147	4,381	22,449
1981	26,443	882	2,985	5,468	5,665	2,047	3,363	1,342	4,691	22,429
1982	28,816	945	3,483	5,718	6,421	2,205	3,767	1,297	4,980	21,064
1983	31,456	1,088	3,960	5,826	7,363	1,962	4,327	1,530	5,400	20,691
1984 2/......	32,230	1,115	3,930	5,955	7,861	1,967	4,591	1,663	5,148	21,020
1985 2/......	32,135	1,258	3,664	5,576	8,113	1,907	4,858	1,802	4,957	21,309
1986 2/......	33,610	1,343	3,717	5,585	8,609	2,088	5,226	1,841	5,201	21,177
1987 2/......	34,085	1,559	3,688	5,254	8,959	2,196	5,526	1,803	5,100	21,933
1988	33,807	1,502	3,204	5,375	9,274	2,289	5,314	1,778	5,071	22,325
1989	34,357	1,703	2,884	5,262	9,751	2,496	5,594	1,871	4,796	23,762
	Foreign students									
1975 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 3/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	9,566	330	1,255	1,819	1,748	894	1,539	673	1,308	1,255
1980	17,999	568	2,203	3,375	4,297	1,456	2,630	1,107	2,363	2,052
1981	19,814	601	2,397	3,740	4,785	1,595	3,059	1,112	2,525	2,154
1982	21,423	577	2,601	4,050	5,112	1,626	3,500	1,181	2,776	2,310
1983	22,871	752	2,529	4,365	5,840	1,372	4,003	1,174	2,836	2,423
1984 2/......	23,309	739	2,418	4,511	5,996	1,471	4,107	1,209	2,858	2,347
1985 2/......	24,158	736	2,459	4,526	6,639	1,623	4,017	1,286	2,872	2,543
1986 2/......	27,116	811	2,449	4,785	7,713	1,801	4,575	1,506	3,476	2,701
1987 2/......	28,144	813	2,630	4,630	8,081	2,065	4,649	1,594	3,682	2,771
1988	29,671	1,031	2,754	4,823	8,379	2,117	5,124	1,643	3,800	3,093
1989	30,223	1,015	2,887	4,906	8,608	2,277	4,800	1,816	3,914	3,282

1/ Master's-granting institutions were not surveyed in 1978; totals include estimates based on 1977 and 1979 data.

2/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

3/ Distribution by citizenship data were not requested before 1979.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-6. Part-time science/engineering graduate students in all institutions by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	109,169	70,261	4,394	2,612	6,223	3,942	1,820	9,530	12,092	29,648
1976	110,645	70,876	4,379	2,815	6,140	3,879	1,837	9,845	11,820	30,161
1977	119,194	73,879	4,350	3,102	5,704	4,504	1,953	10,953	12,918	30,395
1978 1/......	120,115	74,429	4,221	2,973	5,273	4,999	2,155	10,478	13,225	31,105
1979	126,905	78,919	4,165	3,130	5,395	5,837	2,275	10,285	13,921	33,911
1980	130,038	80,202	4,034	3,239	5,458	6,991	2,274	9,962	13,944	34,300
1981	134,433	80,749	4,074	3,384	5,761	8,992	2,024	9,397	13,966	33,151
1982	138,838	83,592	4,159	3,738	6,376	10,641	2,423	9,321	14,280	32,654
1983	140,313	81,352	4,261	3,495	6,433	12,929	2,454	8,943	14,338	28,499
1984 2/......	142,581	81,725	4,212	3,793	6,159	14,223	2,312	8,691	14,966	27,369
1985 2/......	148,475	84,454	4,326	4,106	5,780	15,743	2,283	9,176	15,539	27,501
1986 2/......	150,934	83,712	4,496	3,840	5,592	16,115	2,100	9,038	15,030	27,501
1987 2/......	151,924	84,454	4,324	3,979	5,534	16,565	2,021	8,625	15,359	28,047
1988	151,664	85,242	4,398	3,736	5,639	17,191	2,014	8,509	15,865	27,890
1989	154,364	86,690	4,420	3,724	5,681	16,888	2,094	8,650	16,027	29,206
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	83,320	49,403	3,523	2,576	3,861	3,704	1,655	6,716	6,569	20,799
1978 1/......	80,609	47,966	3,314	2,404	3,504	4,014	1,776	6,209	6,274	20,471
1979	81,969	48,954	3,161	2,454	3,529	4,564	1,816	5,878	6,147	21,405
1980	83,107	49,496	3,137	2,489	3,677	5,307	1,803	5,524	6,248	21,311
1981	82,973	47,764	3,059	2,516	3,806	6,510	1,635	4,820	5,836	19,582
1982	83,891	48,884	3,135	2,785	4,080	7,506	1,883	4,681	5,698	19,116
1983	83,964	46,614	3,215	2,555	4,140	8,930	1,835	4,361	5,282	16,296
1984 2/......	84,617	46,819	3,149	2,765	3,963	10,080	1,747	4,257	5,460	15,398
1985 2/......	88,199	48,171	3,242	2,997	3,612	11,336	1,688	4,453	5,422	15,421
1986 2/......	89,036	47,615	3,372	2,793	3,503	11,702	1,531	4,355	5,127	15,232
1987 2/......	89,291	47,884	3,236	2,882	3,457	11,988	1,430	4,272	5,242	15,377
1988	86,996	47,719	3,265	2,658	3,549	12,367	1,388	3,982	5,314	15,196
1989	87,484	48,078	3,291	2,583	3,584	12,185	1,458	3,974	5,230	15,773
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	35,874	24,476	827	526	1,843	800	298	4,237	6,349	9,596
1978 1/......	39,506	26,463	907	569	1,769	985	379	4,269	6,951	10,634
1979	44,936	29,965	1,004	676	1,866	1,273	459	4,407	7,774	12,506
1980	46,931	30,706	897	750	1,781	1,684	471	4,438	7,696	12,989
1981	51,460	32,985	1,015	868	1,955	2,482	389	4,577	8,130	13,569
1982	54,947	34,708	1,024	953	2,296	3,135	540	4,640	8,582	13,538
1983	56,349	34,738	1,046	940	2,293	3,999	619	4,582	9,056	12,203
1984 2/......	57,964	34,906	1,063	1,028	2,196	4,143	565	4,434	9,506	11,971
1985 2/......	60,276	36,283	1,084	1,109	2,168	4,407	595	4,723	10,117	12,080
1986 2/......	61,898	36,097	1,124	1,047	2,089	4,413	569	4,683	9,903	12,269
1987 2/......	62,633	36,570	1,088	1,097	2,077	4,577	591	4,353	10,117	12,670
1988	64,668	37,523	1,133	1,078	2,090	4,824	626	4,527	10,551	12,694
1989	66,880	38,612	1,129	1,141	2,097	4,703	636	4,676	10,797	13,433

See footnotes at end of table.

Table B-6. Part-time science/engineering graduate students in all institutions by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	30,547	425	1,593	5,197	8,042	7,511	3,670	565	3,544	8,361
1976	29,807	312	1,567	4,977	7,779	7,109	3,394	515	4,154	9,962
1977	31,577	331	1,406	5,261	8,878	7,095	3,839	608	4,159	13,738
1978 1/......	30,748	322	1,493	5,098	8,853	6,313	3,752	596	4,321	14,938
1979	31,869	329	1,474	5,204	8,750	6,971	3,823	621	4,697	16,117
1980	31,977	410	1,655	5,159	9,264	6,098	4,047	656	4,688	17,859
1981	34,222	400	1,635	5,307	9,743	6,384	4,196	671	5,886	19,462
1982	34,355	419	1,691	4,755	10,484	6,039	4,200	646	6,121	20,891
1983	37,625	568	1,811	5,123	12,010	6,287	4,581	743	6,502	21,336
1984 2/......	38,120	591	1,769	5,118	12,449	6,382	5,157	785	5,869	22,736
1985 2/......	40,675	664	1,809	5,163	13,376	7,574	5,282	850	5,957	23,346
1986 2/......	42,367	770	1,593	5,009	13,686	8,271	5,939	823	6,276	24,855
1987 2/......	42,488	749	1,611	5,073	14,299	8,489	6,129	912	5,226	24,982
1988	40,338	785	1,402	4,879	14,307	7,534	5,795	851	4,785	26,084
1989	40,342	787	1,305	4,905	14,947	6,977	5,790	859	4,772	27,332
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	30,122	325	1,307	4,963	8,550	6,716	3,707	567	3,987	3,795
1978 1/......	28,927	313	1,353	4,749	8,455	5,857	3,589	541	4,070	3,716
1979	29,419	316	1,287	4,776	8,271	6,299	3,612	546	4,312	3,596
1980	29,490	390	1,427	4,686	8,839	5,415	3,829	584	4,320	4,121
1981	31,077	384	1,372	4,856	9,178	5,520	3,912	568	5,287	4,132
1982	30,794	382	1,453	4,244	9,751	5,157	3,914	534	5,359	4,213
1983	33,398	523	1,555	4,556	10,909	5,330	4,259	619	5,647	3,952
1984 2/......	33,768	543	1,521	4,526	11,401	5,276	4,762	671	5,068	4,030
1985 2/......	35,756	622	1,540	4,506	12,166	6,280	4,830	686	5,126	4,272
1986 2/......	36,838	716	1,332	4,348	12,253	6,759	5,405	671	5,354	4,583
1987 2/......	36,756	690	1,320	4,362	12,765	6,895	5,565	759	4,400	4,651
1988	34,729	721	1,101	4,147	12,726	6,053	5,210	682	4,089	4,548
1989	34,790	722	1,069	4,123	13,256	5,669	5,237	693	4,021	4,616
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	1,455	6	99	298	328	379	132	41	172	9,943
1978 1/......	1,821	9	140	349	398	456	163	55	251	11,222
1979	2,450	13	187	428	479	672	211	75	385	12,521
1980	2,487	20	228	473	425	683	218	72	368	13,738
1981	3,145	16	263	451	565	864	284	103	599	15,330
1982	3,561	37	238	511	733	882	286	112	762	16,678
1983	4,227	45	256	567	1,101	957	322	124	855	17,384
1984 2/......	4,352	48	248	592	1,048	1,106	395	114	801	18,706
1985 2/......	4,919	42	269	657	1,210	1,294	452	164	831	19,074
1986 2/......	5,529	54	261	661	1,433	1,512	534	152	922	20,272
1987 2/......	5,732	59	291	711	1,534	1,594	564	153	826	20,331
1988	5,609	64	301	732	1,581	1,481	585	169	696	21,536
1989	5,552	65	236	782	1,691	1,308	553	166	751	22,716

1/ Master's-granting institutions were not surveyed and distribution by sex data were not requested in 1978; totals represent estimates based on 1977 and 1979 data.

2/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-7. Science/engineering graduate students in historically black colleges and universities by enrollment status and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	2,315	1,978	231	14	210	45	49	491	250	688
1976	2,677	2,442	245	21	244	100	53	650	303	826
1977	2,899	2,635	277	28	207	129	78	625	265	1,026
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	3,212	2,873	244	23	138	135	105	665	274	1,289
1980	3,189	2,796	248	30	154	139	72	640	291	1,222
1981	3,391	3,007	284	23	168	150	83	610	268	1,421
1982	3,269	2,836	288	31	206	232	87	605	227	1,160
1983	3,446	2,958	319	32	235	271	82	593	384	1,042
1984	3,875	3,288	347	39	266	320	109	536	436	1,235
1985	3,587	3,062	320	34	240	304	66	479	404	1,215
1986	3,454	2,916	299	19	265	279	55	447	419	1,133
1987	3,242	2,707	300	16	259	229	52	409	374	1,068
1988	3,516	2,939	328	36	252	277	64	414	443	1,125
1989	3,429	2,803	306	27	255	290	66	447	375	1,037
	Full time									
1975	1,628	1,403	182	6	80	7	34	372	167	555
1976	1,785	1,638	194	11	95	45	39	459	193	602
1977	1,847	1,683	225	20	70	55	44	471	162	636
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	2,047	1,819	197	16	56	81	60	519	175	715
1980	2,205	1,933	212	20	101	96	41	491	178	794
1981	2,411	2,146	255	18	120	87	42	479	153	992
1982	2,230	1,929	256	29	111	153	46	487	120	727
1983	2,231	1,912	271	27	137	185	39	511	132	610
1984	2,357	1,982	258	25	139	202	79	422	173	684
1985	2,335	1,927	262	25	141	212	27	369	159	732
1986	2,151	1,832	239	7	143	206	26	348	183	680
1987	2,126	1,726	244	9	168	163	36	325	163	618
1988	2,322	1,877	272	18	169	209	41	299	202	667
1989	2,091	1,615	217	17	160	169	45	339	162	506
	Part time									
1975	687	575	49	8	130	38	15	119	83	133
1976	892	804	51	10	149	55	14	191	110	224
1977	1,052	952	52	8	137	74	34	154	103	390
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	1,165	1,054	47	7	82	54	45	146	99	574
1980	984	863	36	10	53	43	31	149	113	428
1981	980	861	29	5	48	63	41	131	115	429
1982	1,039	907	32	2	95	79	41	118	107	433
1983	1,215	1,046	48	5	98	86	43	82	252	432
1984	1,518	1,306	89	14	127	118	30	114	263	551
1985	1,252	1,135	58	9	99	92	39	110	245	483
1986	1,303	1,084	60	12	122	73	29	99	236	453
1987	1,116	981	56	7	91	66	16	84	211	450
1988	1,194	1,062	56	18	83	68	23	115	241	458
1989	1,338	1,188	89	10	95	121	21	108	213	531

See footnotes at end of table.

Table B-7. Science/engineering graduate students in historically black colleges and universities by enrollment status and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	180	0	0	67	28	28	34	0	23	157
1976	148	0	0	67	29	0	35	0	17	87
1977	155	0	0	39	69	0	25	0	22	109
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	212	0	0	79	26	0	21	0	86	127
1980	264	0	0	85	46	26	22	0	85	129
1981	242	0	0	53	66	7	30	0	86	142
1982	267	0	0	44	64	8	30	0	121	166
1983	311	0	0	47	94	23	47	0	100	177
1984	405	0	0	65	131	37	93	0	79	182
1985	342	0	0	46	121	20	81	0	74	183
1986	374	0	0	47	61	0	63	0	203	164
1987	375	0	0	52	129	10	65	0	119	160
1988	422	0	0	57	111	26	102	0	126	155
1989	425	0	0	72	129	26	72	0	126	201
	Full time									
1975	135	0	0	51	13	28	30	0	13	90
1976	109	0	0	53	19	0	30	0	7	38
1977	105	0	0	23	48	0	19	0	15	59
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	159	0	0	66	17	0	16	0	60	69
1980	191	0	0	68	37	16	17	0	53	81
1981	170	0	0	43	59	7	25	0	36	95
1982	192	0	0	31	57	8	26	0	70	109
1983	195	0	0	34	84	10	34	0	33	124
1984	258	0	0	38	102	22	63	0	33	117
1985	273	0	0	42	111	18	71	0	31	135
1986	197	0	0	32	45	0	60	0	60	122
1987	283	0	0	35	104	10	60	0	74	117
1988	333	0	0	40	104	20	92	0	77	112
1989	326	0	0	57	104	19	64	0	82	150
	Part time									
1975	45	0	0	16	15	0	4	0	10	67
1976	39	0	0	14	10	0	5	0	10	49
1977	50	0	0	16	21	0	6	0	7	50
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	53	0	0	13	9	0	5	0	26	58
1980	73	0	0	17	9	10	5	0	32	48
1981	72	0	0	10	7	0	5	0	50	47
1982	75	0	0	13	7	0	4	0	51	57
1983	116	0	0	13	10	13	13	0	67	53
1984	147	0	0	27	29	15	30	0	46	65
1985	69	0	0	4	10	2	10	0	43	48
1986	177	0	0	15	16	0	3	0	143	42
1987	92	0	0	17	25	0	5	0	45	43
1988	89	0	0	17	7	6	10	0	49	43
1989	99	0	0	15	25	7	8	0	44	51

1/ Master's granting-institutions were not surveyed in 1978.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-8. Science/engineering graduate students in historically black colleges and universities by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	2,315	1,978	231	14	210	45	49	491	250	688
1976	2,677	2,442	245	21	244	100	53	650	303	826
1977	2,899	2,635	277	28	207	129	78	625	265	1,026
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	3,212	2,873	244	23	138	135	105	665	274	1,289
1980	3,189	2,796	248	30	154	139	72	640	291	1,222
1981	3,391	3,007	284	23	168	150	83	610	268	1,421
1982	3,269	2,836	288	31	206	232	87	605	227	1,160
1983	3,446	2,958	319	32	235	271	82	593	384	1,042
1984	3,875	3,288	347	39	266	320	109	536	436	1,235
1985	3,587	3,062	320	34	240	304	66	479	404	1,215
1986	3,454	2,916	299	19	265	279	55	447	419	1,133
1987	3,242	2,707	300	16	259	229	52	409	374	1,068
1988	3,516	2,939	328	36	252	277	64	414	443	1,125
1989	3,429	2,803	306	27	255	290	66	447	375	1,037
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	1,782	1,610	203	24	113	100	73	350	99	648
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	1,856	1,626	168	20	66	98	88	378	116	692
1980	1,955	1,676	175	18	68	101	50	383	142	739
1981	2,072	1,807	199	18	87	96	70	340	110	887
1982	1,899	1,625	182	19	111	150	74	316	97	676
1983	1,981	1,675	197	16	139	185	68	321	177	572
1984	2,322	1,924	235	20	162	221	102	274	194	716
1985	2,145	1,801	207	27	140	220	51	222	177	757
1986	2,052	1,702	214	10	160	196	46	225	167	684
1987	1,994	1,646	216	11	178	171	44	209	149	668
1988	2,130	1,723	235	19	168	181	56	213	159	692
1989	2,008	1,570	218	15	163	183	57	207	135	592
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	1,117	1,025	74	4	94	29	5	275	166	378
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	1,356	1,247	76	3	72	37	17	287	158	597
1980	1,234	1,120	73	12	86	38	22	257	149	483
1981	1,319	1,200	85	5	81	54	13	270	158	534
1982	1,370	1,211	106	12	95	82	13	289	130	484
1983	1,465	1,283	122	16	96	86	14	272	207	470
1984	1,553	1,364	112	19	104	99	7	262	242	519
1985	1,442	1,261	113	7	100	84	15	257	227	458
1986	1,402	1,214	85	9	105	83	9	222	252	449
1987	1,248	1,061	84	5	81	58	8	200	225	400
1988	1,386	1,216	93	17	84	96	8	201	284	433
1989	1,421	1,233	88	12	92	107	9	240	240	445

See footnotes at end of table.

Table B-8. Science/engineering graduate students in historically black colleges and universities by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	180	0	0	67	28	28	34	0	23	157
1976	148	0	0	67	29	0	35	0	17	87
1977	155	0	0	39	69	0	25	0	22	109
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	212	0	0	79	26	0	21	0	86	127
1980	264	0	0	85	46	26	22	0	85	129
1981	242	0	0	53	66	7	30	0	86	142
1982	267	0	0	44	64	8	30	0	121	166
1983	311	0	0	47	94	23	47	0	100	177
1984	405	0	0	65	131	37	93	0	79	182
1985	342	0	0	46	121	20	81	0	74	183
1986	374	0	0	47	61	0	63	0	203	164
1987	375	0	0	52	129	10	65	0	119	160
1988	422	0	0	57	111	26	102	0	126	155
1989	425	0	0	72	129	26	72	0	126	201
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	139	0	0	28	66	0	23	0	22	33
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	193	0	0	68	26	0	19	0	80	37
1980	245	0	0	75	45	23	21	0	81	34
1981	226	0	0	46	62	6	30	0	82	39
1982	242	0	0	32	61	8	29	0	112	32
1983	274	0	0	33	87	18	45	0	91	32
1984	364	0	0	54	121	32	86	0	71	34
1985	306	0	0	37	110	13	74	0	72	38
1986	315	0	0	27	50	0	60	0	178	35
1987	318	0	0	30	112	8	59	0	109	30
1988	357	0	0	30	99	21	93	0	114	50
1989	362	0	0	55	113	17	66	0	111	76
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	16	0	0	11	3	0	2	0	0	76
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	19	0	0	11	0	0	2	0	6	90
1980	19	0	0	10	1	3	1	0	4	95
1981	16	0	0	7	4	1	0	0	4	103
1982	25	0	0	12	3	0	1	0	9	134
1983	37	0	0	14	7	5	2	0	9	145
1984	41	0	0	11	10	5	7	0	8	148
1985	36	0	0	9	11	7	7	0	2	145
1986	59	0	0	20	11	0	3	0	25	129
1987	57	0	0	22	17	2	6	0	10	130
1988	65	0	0	27	12	5	9	0	12	105
1989	63	0	0	17	16	9	6	0	15	125

1/ Master's granting-institutions were not surveyed in 1978.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-9. Full-time science/engineering graduate students in historically black colleges and universities by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	1,628	1,403	182	6	80	7	34	372	167	555
1976	1,785	1,638	194	11	95	45	39	459	193	602
1977	1,847	1,683	225	20	70	55	44	471	162	636
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	2,047	1,819	197	16	56	81	60	519	175	715
1980	2,205	1,933	212	20	101	96	41	491	178	794
1981	2,411	2,146	255	18	120	87	42	479	153	992
1982	2,230	1,929	256	29	111	153	46	487	120	727
1983	2,231	1,912	271	27	137	185	39	511	132	610
1984	2,357	1,982	258	25	139	202	79	422	173	684
1985	2,335	1,927	262	25	141	212	27	369	159	732
1986	2,151	1,832	239	7	143	206	26	348	183	680
1987	2,126	1,726	244	9	168	163	36	325	163	618
1988	2,322	1,877	272	18	169	209	41	299	202	667
1989	2,091	1,615	217	17	160	169	45	339	162	506
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	1,168	1,047	167	18	41	37	42	271	61	410
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	1,283	1,110	140	16	35	60	55	292	79	433
1980	1,412	1,206	152	11	47	73	36	299	92	496
1981	1,550	1,355	183	15	65	50	34	267	62	679
1982	1,352	1,152	161	18	66	102	38	260	45	462
1983	1,338	1,136	170	15	88	128	35	283	60	357
1984	1,464	1,203	172	15	90	140	75	216	70	425
1985	1,485	1,207	178	22	102	153	21	170	64	497
1986	1,326	1,142	177	4	100	149	23	185	60	444
1987	1,368	1,101	180	7	130	126	32	162	65	399
1988	1,483	1,157	199	7	124	133	38	159	80	417
1989	1,293	941	164	10	111	99	42	162	60	293
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	679	636	58	2	29	18	2	200	101	226
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	764	709	57	0	21	21	5	227	96	282
1980	793	727	60	9	54	23	5	192	86	298
1981	861	791	72	3	55	37	8	212	91	313
1982	878	777	95	11	45	51	8	227	75	265
1983	893	776	101	12	49	57	4	228	72	253
1984	893	779	86	10	49	62	4	206	103	259
1985	850	720	84	3	39	59	6	199	95	235
1986	825	690	62	3	43	57	3	163	123	236
1987	758	625	64	2	38	37	4	163	98	219
1988	839	720	73	11	45	76	3	140	122	250
1989	798	674	53	7	49	70	3	177	102	213

See footnotes at end of table.

Table B-9. Full-time science/engineering graduate students in historically black colleges and universities by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	135	0	0	51	13	28	30	0	13	90
1976	109	0	0	53	19	0	30	0	7	38
1977	105	0	0	23	48	0	19	0	15	59
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	159	0	0	66	17	0	16	0	60	69
1980	191	0	0	68	37	16	17	0	53	81
1981	170	0	0	43	59	7	25	0	36	95
1982	192	0	0	31	57	8	26	0	70	109
1983	195	0	0	34	84	10	34	0	33	124
1984	258	0	0	38	102	22	63	0	33	117
1985	273	0	0	42	111	18	71	0	31	135
1986	197	0	0	32	45	0	60	0	60	122
1987	283	0	0	35	104	10	60	0	74	117
1988	333	0	0	40	104	20	92	0	77	112
1989	326	0	0	57	104	19	64	0	82	150
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	95	0	0	17	46	0	17	0	15	26
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	142	0	0	55	17	0	14	0	56	31
1980	177	0	0	62	36	14	16	0	49	29
1981	158	0	0	37	55	6	25	0	35	37
1982	175	0	0	24	54	8	25	0	64	25
1983	172	0	0	26	77	9	32	0	28	30
1984	231	0	0	32	94	18	58	0	29	30
1985	243	0	0	34	100	12	66	0	31	35
1986	152	0	0	17	35	0	57	0	43	32
1987	239	0	0	19	91	8	54	0	67	28
1988	282	0	0	20	92	15	84	0	71	44
1989	281	0	0	46	91	12	59	0	73	71
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	10	0	0	6	2	0	2	0	0	33
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	17	0	0	11	0	0	2	0	4	38
1980	14	0	0	6	1	2	1	0	4	52
1981	12	0	0	6	4	1	0	0	1	58
1982	17	0	0	7	3	0	1	0	6	84
1983	23	0	0	8	7	1	2	0	5	94
1984	27	0	0	6	8	4	5	0	4	87
1985	30	0	0	8	11	6	5	0	0	100
1986	45	0	0	15	10	0	3	0	17	90
1987	44	0	0	16	13	2	6	0	7	89
1988	51	0	0	20	12	5	8	0	6	68
1989	45	0	0	11	13	7	5	0	9	79

1/ Master's granting-institutions were not surveyed in 1978.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-10. Full-time science/engineering graduate students in historically black colleges and universities by citizenship and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	1,628	1,403	182	6	80	7	34	372	167	555
1976	1,785	1,638	194	11	95	45	39	459	193	602
1977	1,847	1,683	225	20	70	55	44	471	162	636
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	2,047	1,819	197	16	56	81	60	519	175	715
1980	2,205	1,933	212	20	101	96	41	491	178	794
1981	2,411	2,146	255	18	120	87	42	479	153	992
1982	2,230	1,929	256	29	111	153	46	487	120	727
1983	2,231	1,912	271	27	137	185	39	511	132	610
1984	2,357	1,982	258	25	139	202	79	422	173	684
1985	2,335	1,927	262	25	141	212	27	369	159	732
1986	2,151	1,832	239	7	143	206	26	348	183	680
1987	2,126	1,726	244	9	168	163	36	325	163	618
1988	2,322	1,877	272	18	169	209	41	299	202	667
1989	2,091	1,615	217	17	160	169	45	339	162	506
	U.S. citizens									
1975 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	1,839	1,618	164	2	52	56	45	452	174	673
1980	1,503	1,322	145	8	55	48	17	322	162	565
1981	1,523	1,362	157	6	53	46	17	340	140	603
1982	1,318	1,163	153	14	49	85	10	345	112	395
1983	1,382	1,222	179	19	53	111	6	360	127	367
1984	1,495	1,294	170	7	71	122	13	295	160	456
1985	1,403	1,196	145	11	63	97	15	262	148	455
1986	1,255	1,072	135	4	84	98	5	232	176	338
1987	1,203	1,005	145	7	99	56	7	210	153	328
1988	1,444	1,206	178	14	96	115	4	208	190	401
1989	1,409	1,096	120	12	92	124	6	242	154	346
	Foreign students									
1975 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	208	201	33	14	4	25	15	67	1	42
1980	702	611	67	12	46	48	24	169	16	229
1981	888	784	98	12	67	41	25	139	13	389
1982	912	766	103	15	62	68	36	142	8	332
1983	849	690	92	8	84	74	33	151	5	243
1984	862	688	88	18	68	80	66	127	13	228
1985	932	731	117	14	78	115	12	107	11	277
1986	896	760	104	3	59	108	21	116	7	342
1987	923	721	99	2	69	107	29	115	10	290
1988	878	671	94	4	73	94	37	91	12	266
1989	682	519	97	5	68	45	39	97	8	160

See footnotes at end of table.

Table B-10. Full-time science/engineering graduate students in historically black colleges and universities by citizenship and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engi-neering, total	Aerospace	Chemical engi-neering	Civil engi-neering	Electrical engi-neering	Industrial engi-neering	Mechanical engi-neering	Metallur-gical & materials engi-neering	Other engi-neering	
	Total enrollment									
1975	135	0	0	51	13	28	30	0	13	90
1976	109	0	0	53	19	0	30	0	7	38
1977	105	0	0	23	48	0	19	0	15	59
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	159	0	0	66	17	0	16	0	60	69
1980	191	0	0	68	37	16	17	0	53	81
1981	170	0	0	43	59	7	25	0	36	95
1982	192	0	0	31	57	8	26	0	70	109
1983	195	0	0	34	84	10	34	0	33	124
1984	258	0	0	38	102	22	63	0	33	117
1985	273	0	0	42	111	18	71	0	31	135
1986	197	0	0	32	45	0	60	0	60	122
1987	283	0	0	35	104	10	60	0	74	117
1988	333	0	0	40	104	20	92	0	77	112
1989	326	0	0	57	104	19	64	0	82	150
	U.S. citizens									
1975 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	159	0	0	66	17	0	16	0	60	62
1980	106	0	0	58	18	9	3	0	18	75
1981	84	0	0	32	38	1	5	0	8	77
1982	64	0	0	11	33	5	2	0	13	91
1983	63	0	0	12	27	7	4	0	13	97
1984	95	0	0	13	42	15	16	0	9	106
1985	91	0	0	12	49	10	15	0	5	116
1986	74	0	0	8	16	0	11	0	39	109
1987	92	0	0	9	39	7	17	0	20	106
1988	140	0	0	16	61	20	27	0	16	98
1989	177	0	0	46	59	10	30	0	32	136
	Foreign students									
1975 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	0	0	0	0	0	0	0	0	0	7
1980	85	0	0	10	19	7	14	0	35	6
1981	86	0	0	11	21	6	20	0	28	18
1982	128	0	0	20	24	3	24	0	57	18
1983	132	0	0	22	57	3	30	0	20	27
1984	163	0	0	25	60	7	47	0	24	11
1985	182	0	0	30	62	8	56	0	26	19
1986	123	0	0	24	29	0	49	0	21	13
1987	191	0	0	26	65	3	43	0	54	11
1988	193	0	0	24	43	0	65	0	61	14
1989	149	0	0	11	45	9	34	0	50	14

1/ Master's granting-institutions were not surveyed in 1978.

2/ Distribution by citizenship was not requested before 1979.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-11. Part-time science/engineering graduate students in historically black colleges and universities by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	687	575	49	8	130	38	15	119	83	133
1976	892	804	51	10	149	55	14	191	110	224
1977	1,052	952	52	8	137	74	34	154	103	390
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	1,165	1,054	47	7	82	54	45	146	99	574
1980	984	863	36	10	53	43	31	149	113	428
1981	980	861	29	5	48	63	41	131	115	429
1982	1,039	907	32	2	95	79	41	118	107	433
1983	1,215	1,046	48	5	98	86	43	82	252	432
1984	1,518	1,306	89	14	127	118	30	114	263	551
1985	1,252	1,135	58	9	99	92	39	110	245	483
1986	1,303	1,084	60	12	122	73	29	99	236	453
1987	1,116	981	56	7	91	66	16	84	211	450
1988	1,194	1,062	56	18	83	68	23	115	241	458
1989	1,338	1,188	89	10	95	121	21	108	213	531
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	614	563	36	6	72	63	31	79	38	238
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	573	516	28	4	31	38	33	86	37	259
1980	543	470	23	7	21	28	14	84	50	243
1981	522	452	16	3	22	46	36	73	48	208
1982	547	473	21	1	45	48	36	56	52	214
1983	643	539	27	1	51	57	33	38	117	215
1984	858	721	63	5	72	81	27	58	124	291
1985	660	594	29	5	38	67	30	52	113	260
1986	726	560	37	6	60	47	23	40	107	240
1987	626	545	36	4	48	45	12	47	84	269
1988	647	566	36	12	44	48	18	54	79	275
1989	715	629	54	5	52	84	15	45	75	299
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	438	389	16	2	65	11	3	75	65	152
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	592	538	19	3	51	16	12	60	62	315
1980	441	393	13	3	32	15	17	65	63	185
1981	458	409	13	2	26	17	5	58	67	221
1982	492	434	11	1	50	31	5	62	55	219
1983	572	507	21	4	47	29	10	44	135	217
1984	660	585	26	9	55	37	3	56	139	260
1985	592	541	29	4	61	25	9	58	132	223
1986	577	524	23	6	62	26	6	59	129	213
1987	490	436	20	3	43	21	4	37	127	181
1988	547	496	20	6	39	20	5	61	162	183
1989	623	559	35	5	43	37	6	63	138	232

See footnotes at end of table.

Table B-11. Part-time science/engineering graduate students in historically black colleges and universities by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	45	0	0	16	15	0	4	0	10	67
1976	39	0	0	14	10	0	5	0	10	49
1977	50	0	0	16	21	0	6	0	7	50
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	53	0	0	13	9	0	5	0	26	58
1980	73	0	0	17	9	10	5	0	32	48
1981	72	0	0	10	7	0	5	0	50	47
1982	75	0	0	13	7	0	4	0	51	57
1983	116	0	0	13	10	13	13	0	67	53
1984	147	0	0	27	29	15	30	0	46	65
1985	69	0	0	4	10	2	10	0	43	48
1986	177	0	0	15	16	0	3	0	143	42
1987	92	0	0	17	25	0	5	0	45	43
1988	89	0	0	17	7	6	10	0	49	43
1989	99	0	0	15	25	7	8	0	44	51
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	44	0	0	11	20	0	6	0	7	7
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	51	0	0	13	9	0	5	0	24	6
1980	68	0	0	13	9	9	5	0	32	5
1981	68	0	0	9	7	0	5	0	47	2
1982	67	0	0	8	7	0	4	0	48	7
1983	102	0	0	7	10	9	13	0	63	2
1984	133	0	0	22	27	14	28	0	42	4
1985	63	0	0	3	10	1	8	0	41	3
1986	163	0	0	10	15	0	3	0	135	3
1987	79	0	0	11	21	0	5	0	42	2
1988	75	0	0	10	7	6	9	0	43	6
1989	81	0	0	9	22	5	7	0	38	5
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	6	0	0	5	1	0	0	0	0	43
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	2	0	0	0	0	0	0	0	2	52
1980	5	0	0	4	0	1	0	0	0	43
1981	4	0	0	1	0	0	0	0	3	45
1982	8	0	0	5	0	0	0	0	3	50
1983	14	0	0	6	0	4	0	0	4	51
1984	14	0	0	5	2	1	2	0	4	61
1985	6	0	0	1	0	1	2	0	2	45
1986	14	0	0	5	1	0	0	0	8	39
1987	13	0	0	6	4	0	0	0	3	41
1988	14	0	0	7	0	0	1	0	6	37
1989	18	0	0	6	3	2	1	0	6	46

1/ Master's granting-institutions were not surveyed in 1978.

NOTE: NA = not availible. See Technical Note for a descripton of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-12. Science/engineering graduate students in land-grant institutions by enrollment status and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmos- pheric and ocean sciences	Mathe- matical sciences	Computer sciences	Agri- cultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	109,530	78,999	10,036	4,957	5,232	3,013	8,693	18,576	6,965	21,527
1976	111,551	80,610	10,334	5,451	5,060	3,058	9,137	19,444	6,966	21,160
1977	112,645	81,242	10,448	5,643	4,892	3,082	9,388	19,685	6,820	21,284
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	114,774	81,413	10,413	5,556	4,676	3,265	9,704	19,338	6,730	21,731
1980	118,344	82,778	10,616	5,678	4,672	3,722	9,737	19,441	6,842	22,070
1981	119,554	82,442	10,774	5,857	4,771	3,952	9,774	19,266	6,779	21,269
1982	122,192	82,841	11,153	6,104	4,922	4,346	9,852	18,952	6,769	20,743
1983	124,644	83,912	11,516	6,338	5,191	4,858	9,820	19,055	6,977	20,157
1984	125,598	84,901	11,783	6,329	5,461	5,393	9,569	19,115	7,130	20,121
1985	127,684	85,704	12,102	6,295	5,619	6,059	9,133	19,223	7,378	19,895
1986	131,972	87,387	12,589	6,247	5,956	6,258	9,150	19,454	7,395	20,338
1987	132,274	86,877	12,775	5,885	6,296	6,378	8,921	19,277	7,088	20,257
1988	134,333	88,046	12,959	5,727	6,651	6,469	8,794	19,438	7,560	20,448
1989	137,989	90,149	13,077	5,738	6,786	6,586	8,730	19,855	7,845	21,532
	Full time									
1975	90,468	66,323	9,266	4,157	4,396	1,945	7,444	16,439	5,981	16,695
1976	91,543	67,507	9,463	4,617	4,206	2,054	7,865	17,187	5,928	16,187
1977	91,421	67,243	9,518	4,762	4,101	1,986	8,057	17,224	5,718	15,877
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	92,508	66,684	9,634	4,678	3,906	2,250	8,035	16,896	5,636	15,649
1980	94,781	67,395	9,855	4,703	3,927	2,493	8,127	16,937	5,475	15,878
1981	96,320	67,990	10,011	4,857	4,138	2,763	8,353	16,907	5,453	15,508
1982	96,875	67,608	10,309	5,029	4,255	3,073	8,188	16,420	5,421	14,913
1983	98,985	68,487	10,647	5,273	4,439	3,459	8,100	16,557	5,332	14,680
1984	100,604	69,402	10,932	5,157	4,612	3,766	7,970	16,760	5,470	14,735
1985	101,141	69,532	11,113	4,960	4,831	4,466	7,526	16,603	5,519	14,514
1986	105,413	71,751	11,626	5,013	5,100	4,762	7,648	17,049	5,693	14,860
1987	105,887	71,806	11,901	4,618	5,531	4,828	7,546	17,049	5,609	14,724
1988	107,272	72,289	11,987	4,446	5,744	4,697	7,464	17,135	5,848	14,968
1989	109,469	73,811	12,100	4,512	5,933	4,823	7,281	17,600	5,972	15,590
	Part time									
1975	19,062	12,676	770	800	836	1,068	1,249	2,137	984	4,832
1976	20,008	13,103	871	834	854	1,004	1,272	2,257	1,038	4,973
1977	21,224	13,999	930	881	791	1,096	1,331	2,461	1,102	5,407
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	22,266	14,729	779	878	770	1,015	1,669	2,442	1,094	6,082
1980	23,563	15,383	761	975	745	1,229	1,610	2,504	1,367	6,192
1981	23,234	14,452	763	1,000	633	1,189	1,421	2,359	1,326	5,761
1982	25,317	15,233	844	1,075	667	1,273	1,664	2,532	1,348	5,830
1983	25,659	15,425	869	1,065	752	1,399	1,720	2,498	1,645	5,477
1984	24,994	15,499	851	1,172	849	1,627	1,599	2,355	1,660	5,386
1985	26,543	16,172	989	1,335	788	1,593	1,607	2,620	1,859	5,381
1986	26,559	15,636	963	1,234	856	1,496	1,502	2,405	1,702	5,478
1987	26,387	15,071	874	1,267	765	1,550	1,375	2,228	1,479	5,533
1988	27,061	15,757	972	1,281	907	1,772	1,330	2,303	1,712	5,480
1989	28,520	16,338	977	1,226	853	1,763	1,449	2,255	1,873	5,942

See footnotes at end of table.

Table B-12. Science/engineering graduate students in land-grant institutions by enrollment status and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engi-neering, total	Aerospace	Chemical engi-neering	Civil engi-neering	Electrical engi-neering	Industrial engi-neering	Mechanical engi-neering	Metallur-gical & materials engi-neering	Other engi-neering	
	Total enrollment									
1975	22,976	640	2,090	4,519	5,455	2,335	3,327	1,012	3,598	7,555
1976	23,064	617	2,121	4,663	5,287	2,351	3,254	1,065	3,706	7,877
1977	23,209	588	2,174	4,792	5,352	2,364	3,166	1,084	3,689	8,194
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	24,110	566	2,274	4,930	5,230	2,645	3,453	1,226	3,786	9,251
1980	25,538	651	2,522	5,210	5,727	2,829	3,768	1,259	3,572	10,028
1981	26,995	709	2,735	5,235	6,081	2,567	4,124	1,318	4,226	10,117
1982	29,015	729	2,967	5,371	6,689	2,725	4,595	1,313	4,626	10,336
1983	31,111	959	3,159	5,785	7,505	2,309	5,182	1,403	4,809	9,621
1984	30,931	943	3,076	5,830	7,770	2,410	5,365	1,544	3,993	9,766
1985	31,874	1,022	3,015	5,812	8,377	2,773	5,267	1,660	3,948	10,106
1986	34,482	1,093	3,054	5,934	9,134	3,048	5,804	1,785	4,630	10,103
1987	35,121	1,103	3,128	5,785	9,657	2,997	6,040	1,788	4,623	10,276
1988	35,305	1,173	2,944	6,045	9,717	2,836	6,138	1,813	4,639	10,982
1989	36,152	1,253	2,999	6,047	10,012	3,139	5,971	1,960	4,771	11,688
	Full time									
1975	17,910	502	1,739	3,566	4,046	1,772	2,522	881	2,882	6,235
1976	17,740	506	1,791	3,698	3,974	1,702	2,441	953	2,675	6,296
1977	17,746	478	1,836	3,869	3,825	1,596	2,395	988	2,759	6,432
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	18,848	470	2,008	4,118	3,820	1,863	2,717	1,089	2,763	6,976
1980	20,087	557	2,209	4,353	4,351	2,012	2,910	1,078	2,617	7,299
1981	21,252	608	2,400	4,369	4,724	1,740	3,301	1,198	2,912	7,078
1982	22,447	657	2,647	4,509	4,941	1,763	3,632	1,183	3,115	6,820
1983	23,717	774	2,814	4,822	5,530	1,330	4,133	1,261	3,053	6,781
1984	24,251	726	2,748	4,836	5,876	1,392	4,222	1,380	3,071	6,951
1985	24,473	783	2,633	4,744	6,100	1,464	4,215	1,487	3,047	7,136
1986	26,580	848	2,729	4,959	6,687	1,600	4,651	1,599	3,507	7,082
1987	26,982	886	2,344	4,807	6,876	1,563	4,843	1,612	3,551	7,099
1988	27,481	969	2,632	5,043	7,133	1,562	5,006	1,621	3,515	7,502
1989	27,938	1,047	2,709	4,956	7,409	1,683	4,899	1,782	3,453	7,720
	Part time									
1975	5,066	138	351	953	1,409	563	805	131	716	1,320
1976	5,324	111	330	965	1,313	649	813	112	1,031	1,581
1977	5,463	110	338	923	1,527	768	771	96	930	1,762
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	5,262	96	266	812	1,410	782	736	137	1,023	2,275
1980	5,451	94	313	857	1,376	817	858	181	955	2,729
1981	5,743	101	335	866	1,357	827	823	120	1,314	3,039
1982	6,568	72	320	862	1,748	962	963	130	1,511	3,516
1983	7,394	185	345	963	1,975	979	1,049	142	1,756	2,840
1984	6,680	217	328	994	1,894	1,018	1,143	164	922	2,815
1985	7,401	239	382	1,068	2,277	1,309	1,052	173	901	2,970
1986	7,902	245	325	975	2,447	1,448	1,153	186	1,123	3,021
1987	8,139	217	284	978	2,781	1,434	1,197	176	1,072	3,177
1988	7,824	204	312	1,002	2,584	1,274	1,132	192	1,124	3,480
1989	8,214	206	290	1,091	2,603	1,456	1,072	178	1,318	3,968

1/ Master's granting-institutions were not surveyed in 1978.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

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Table B-13. Science/engineering graduate students in land-grant institutions by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	109,530	78,999	10,036	4,957	5,232	3,013	8,693	18,576	6,965	21,527
1976	111,551	80,610	10,334	5,451	5,060	3,058	9,137	19,444	6,966	21,160
1977	112,645	81,242	10,448	5,643	4,892	3,082	9,388	19,685	6,820	21,284
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	114,774	81,413	10,413	5,556	4,676	3,265	9,704	19,338	6,730	21,731
1980	118,344	82,778	10,616	5,678	4,672	3,722	9,737	19,441	6,842	22,070
1981	119,554	82,442	10,774	5,857	4,771	3,952	9,774	19,266	6,779	21,269
1982	122,192	82,841	11,153	6,104	4,922	4,346	9,852	18,952	6,769	20,743
1983	124,644	83,912	11,516	6,338	5,191	4,858	9,820	19,055	6,977	20,157
1984	125,598	84,901	11,783	6,329	5,461	5,393	9,569	19,115	7,130	20,121
1985	127,684	85,704	12,102	6,295	5,619	6,059	9,133	19,223	7,378	19,895
1986	131,972	87,387	12,589	6,247	5,956	6,258	9,150	19,454	7,395	20,338
1987	132,274	86,877	12,775	5,885	6,296	6,378	8,921	19,277	7,088	20,257
1988	134,333	88,046	12,959	5,727	6,651	6,469	8,794	19,438	7,560	20,448
1989	137,989	90,149	13,077	5,738	6,786	6,586	8,730	19,855	7,845	21,532
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	83,844	59,081	8,990	4,689	3,761	2,551	7,653	13,373	3,581	14,483
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	82,083	57,204	8,873	4,456	3,544	2,663	7,527	12,549	3,437	14,155
1980	82,865	56,722	8,956	4,430	3,556	2,897	7,395	12,397	3,203	13,888
1981	82,943	55,707	8,929	4,498	3,600	2,989	7,502	11,913	3,044	13,232
1982	84,312	55,474	9,128	4,653	3,639	3,267	7,401	11,484	3,038	12,864
1983	86,366	55,893	9,325	4,812	3,823	3,679	7,358	11,421	3,025	12,450
1984	86,623	56,480	9,524	4,829	3,978	4,088	7,113	11,362	3,033	12,553
1985	87,865	56,723	9,726	4,711	4,054	4,656	6,771	11,448	3,098	12,259
1986	90,676	57,551	10,043	4,665	4,281	4,889	6,788	11,398	3,082	12,405
1987	90,818	57,057	10,129	4,377	4,546	5,102	6,546	11,209	2,766	12,382
1988	91,126	57,147	10,149	4,227	4,806	5,144	6,387	11,217	2,884	12,333
1989	92,110	57,568	10,155	4,145	4,806	5,315	6,252	11,300	2,930	12,665
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	28,801	22,161	1,458	954	1,131	531	1,735	6,312	3,239	6,801
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	32,691	24,209	1,540	1,100	1,132	602	2,177	6,789	3,293	7,576
1980	35,479	26,056	1,660	1,248	1,116	825	2,342	7,044	3,639	8,182
1981	36,611	26,735	1,845	1,359	1,171	963	2,272	7,353	3,735	8,037
1982	37,880	27,367	2,025	1,451	1,283	1,079	2,451	7,468	3,731	7,879
1983	38,278	28,019	2,191	1,526	1,368	1,179	2,462	7,634	3,952	7,707
1984	38,975	28,421	2,259	1,500	1,483	1,305	2,456	7,753	4,097	7,568
1985	39,819	28,981	2,376	1,584	1,565	1,403	2,362	7,775	4,280	7,636
1986	41,296	29,836	2,546	1,582	1,675	1,369	2,362	8,056	4,313	7,933
1987	41,456	29,820	2,646	1,508	1,750	1,276	2,375	8,068	4,322	7,875
1988	43,207	30,899	2,810	1,500	1,845	1,325	2,407	8,221	4,676	8,115
1989	45,879	32,581	2,922	1,593	1,980	1,271	2,478	8,555	4,915	8,867

See footnotes at end of table.

Table B-13. Science/engineering graduate students in land-grant institutions by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engi-neering, total	Aerospace	Chemical engi-neering	Civil engi-neering	Electrical engi-neering	Industrial engi-neering	Mechanical engi-neering	Metallur-gical & materials engi-neering	Other engi-neering	
	Total enrollment									
1975	22,976	640	2,090	4,519	5,455	2,335	3,327	1,012	3,598	7,555
1976	23,064	617	2,121	4,663	5,287	2,351	3,254	1,065	3,706	7,877
1977	23,209	588	2,174	4,792	5,352	2,364	3,166	1,084	3,689	8,194
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	24,110	566	2,274	4,930	5,230	2,645	3,453	1,226	3,786	9,251
1980	25,538	651	2,522	5,210	5,727	2,829	3,768	1,259	3,572	10,028
1981	26,995	709	2,735	5,235	6,081	2,567	4,124	1,318	4,226	10,117
1982	29,015	729	2,967	5,371	6,689	2,725	4,595	1,313	4,626	10,336
1983	31,111	959	3,159	5,785	7,505	2,309	5,182	1,403	4,809	9,621
1984	30,931	943	3,076	5,830	7,770	2,410	5,365	1,544	3,993	9,766
1985	31,874	1,022	3,015	5,812	8,377	2,773	5,267	1,660	3,948	10,106
1986	34,482	1,093	3,054	5,934	9,134	3,048	5,804	1,785	4,630	10,103
1987	35,121	1,103	3,128	5,785	9,657	2,997	6,040	1,788	4,623	10,276
1988	35,305	1,173	2,944	6,045	9,717	2,836	6,138	1,813	4,639	10,982
1989	36,152	1,253	2,999	6,047	10,012	3,139	5,971	1,960	4,771	11,688
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	21,768	572	2,008	4,372	5,134	2,094	3,071	1,001	3,516	2,995
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	21,992	550	2,045	4,320	4,975	2,202	3,273	1,106	3,521	2,887
1980	23,069	622	2,252	4,507	5,392	2,313	3,543	1,133	3,307	3,074
1981	24,252	682	2,443	4,514	5,682	2,026	3,859	1,171	3,875	2,984
1982	25,892	695	2,604	4,618	6,214	2,163	4,273	1,138	4,187	2,946
1983	27,825	918	2,765	4,949	6,910	1,894	4,844	1,208	4,337	2,648
1984	27,529	897	2,702	4,990	7,089	1,964	5,012	1,341	3,534	2,614
1985	28,260	966	2,655	4,919	7,674	2,291	4,898	1,393	3,464	2,882
1986	30,441	1,022	2,683	5,024	8,289	2,516	5,363	1,477	4,067	2,684
1987	30,843	1,036	2,686	4,894	8,775	2,451	5,551	1,450	4,000	2,918
1988	30,957	1,102	2,520	5,066	8,799	2,364	5,608	1,480	4,018	3,022
1989	31,540	1,177	2,566	5,075	9,017	2,568	5,457	1,607	4,073	3,002
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	1,441	16	166	420	218	270	95	83	173	5,199
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	2,118	16	229	610	255	443	180	120	265	6,364
1980	2,469	29	270	703	335	516	225	126	265	6,954
1981	2,743	27	292	721	399	541	265	147	351	7,133
1982	3,123	34	363	753	475	562	322	175	439	7,390
1983	3,286	41	394	836	595	415	338	195	472	6,973
1984	3,402	46	374	840	681	446	353	203	459	7,152
1985	3,614	56	360	893	703	482	369	267	484	7,224
1986	4,041	71	371	910	845	532	441	308	563	7,419
1987	4,278	67	442	891	882	546	489	338	623	7,358
1988	4,348	71	424	979	918	472	530	333	621	7,960
1989	4,612	76	433	972	995	571	514	353	698	8,686

1/ Master's granting-institutions were not surveyed in 1978.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-14. Full-time science/engineering graduate students in land-grant institutions by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	90,468	66,323	9,266	4,157	4,396	1,945	7,444	16,439	5,981	16,695
1976	91,543	67,507	9,463	4,617	4,206	2,054	7,865	17,187	5,928	16,187
1977	91,421	67,243	9,518	4,762	4,101	1,986	8,057	17,224	5,718	15,877
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	92,508	66,684	9,634	4,678	3,906	2,250	8,035	16,896	5,636	15,649
1980	94,781	67,395	9,855	4,703	3,927	2,493	8,127	16,937	5,475	15,878
1981	96,320	67,990	10,011	4,857	4,138	2,763	8,353	16,907	5,453	15,508
1982	96,875	67,608	10,309	5,029	4,255	3,073	8,188	16,420	5,421	14,913
1983	98,985	68,487	10,647	5,273	4,439	3,459	8,100	16,557	5,332	14,680
1984	100,604	69,402	10,932	5,157	4,612	3,766	7,970	16,760	5,470	14,735
1985	101,141	69,532	11,113	4,960	4,831	4,466	7,526	16,603	5,519	14,514
1986	105,413	71,751	11,626	5,013	5,100	4,762	7,648	17,049	5,693	14,860
1987	105,887	71,806	11,901	4,618	5,531	4,828	7,546	17,049	5,609	14,724
1988	107,272	72,289	11,987	4,446	5,744	4,697	7,464	17,135	5,848	14,968
1989	109,469	73,811	12,100	4,512	5,933	4,823	7,281	17,600	5,972	15,590
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	68,509	49,397	8,216	3,964	3,210	1,665	6,536	11,840	3,067	10,899
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	67,035	47,521	8,248	3,757	3,056	1,822	6,214	11,070	2,928	10,426
1980	67,600	46,983	8,364	3,667	3,049	1,987	6,127	10,936	2,618	10,235
1981	68,162	46,697	8,343	3,745	3,168	2,122	6,369	10,638	2,503	9,809
1982	68,346	46,039	8,481	3,865	3,188	2,318	6,122	10,130	2,468	9,467
1983	69,761	46,412	8,643	4,022	3,315	2,667	6,068	10,073	2,349	9,275
1984	70,716	46,977	8,877	3,984	3,429	2,897	5,887	10,119	2,392	9,392
1985	71,062	46,992	8,965	3,744	3,539	3,522	5,586	10,073	2,399	9,164
1986	73,845	48,146	9,300	3,752	3,733	3,809	5,682	10,122	2,431	9,317
1987	74,001	47,932	9,467	3,455	4,048	3,925	5,552	10,009	2,215	9,261
1988	74,206	47,688	9,412	3,293	4,202	3,799	5,447	10,025	2,214	9,296
1989	74,888	48,117	9,427	3,303	4,266	3,982	5,226	10,157	2,278	9,478
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	22,912	17,846	1,302	798	891	321	1,521	5,384	2,651	4,978
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	25,473	19,163	1,386	921	850	428	1,821	5,826	2,708	5,223
1980	27,181	20,412	1,491	1,036	878	506	2,000	6,001	2,857	5,643
1981	28,158	21,293	1,668	1,112	970	641	1,984	6,269	2,950	5,699
1982	28,529	21,569	1,828	1,164	1,067	755	2,066	6,290	2,953	5,446
1983	29,224	22,075	2,004	1,251	1,124	792	2,032	6,484	2,983	5,405
1984	29,888	22,425	2,055	1,173	1,183	869	2,083	6,641	3,078	5,343
1985	30,079	22,540	2,148	1,216	1,292	944	1,940	6,530	3,120	5,350
1986	31,568	23,605	2,326	1,261	1,367	953	1,966	6,927	3,262	5,543
1987	31,886	23,874	2,434	1,163	1,483	903	1,994	7,040	3,394	5,463
1988	33,066	24,601	2,575	1,153	1,542	898	2,017	7,110	3,634	5,672
1989	34,581	25,694	2,673	1,209	1,667	841	2,055	7,443	3,694	6,112

See footnotes at end of table.

Table B-14. Full-time science/engineering graduate students in land-grant institutions by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	17,910	502	1,739	3,566	4,046	1,772	2,522	881	2,882	6,235
1976	17,740	506	1,791	3,698	3,974	1,702	2,441	953	2,675	6,296
1977	17,746	478	1,836	3,869	3,825	1,596	2,395	988	2,759	6,432
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	18,848	470	2,008	4,118	3,820	1,863	2,717	1,089	2,763	6,976
1980	20,087	557	2,209	4,353	4,351	2,012	2,910	1,078	2,617	7,299
1981	21,252	608	2,400	4,369	4,724	1,740	3,301	1,198	2,912	7,078
1982	22,447	657	2,647	4,509	4,941	1,763	3,632	1,183	3,115	6,820
1983	23,717	774	2,814	4,822	5,530	1,330	4,133	1,261	3,053	6,781
1984	24,251	726	2,748	4,836	5,876	1,392	4,222	1,380	3,071	6,951
1985	24,473	783	2,633	4,744	6,100	1,464	4,215	1,487	3,047	7,136
1986	26,580	848	2,729	4,959	6,687	1,600	4,651	1,599	3,507	7,082
1987	26,982	886	2,844	4,807	6,876	1,563	4,843	1,612	3,551	7,099
1988	27,481	969	2,632	5,043	7,133	1,562	5,006	1,621	3,515	7,502
1989	27,938	1,047	2,709	4,956	7,409	1,683	4,899	1,782	3,453	7,720
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	16,540	464	1,689	3,486	3,662	1,393	2,330	908	2,608	2,572
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	17,097	455	1,815	3,562	3,617	1,509	2,587	984	2,568	2,417
1980	18,077	533	1,986	3,718	4,086	1,609	2,747	965	2,433	2,540
1981	19,047	584	2,164	3,714	4,401	1,365	3,105	1,065	2,649	2,418
1982	19,990	627	2,336	3,845	4,591	1,374	3,387	1,035	2,795	2,317
1983	21,180	742	2,456	4,106	5,089	1,080	3,883	1,096	2,728	2,169
1984	21,577	690	2,417	4,124	5,334	1,109	3,962	1,208	2,733	2,162
1985	21,703	737	2,325	3,999	5,589	1,165	3,943	1,261	2,684	2,367
1986	23,475	791	2,406	4,179	6,069	1,273	4,335	1,326	3,096	2,224
1987	23,692	833	2,449	4,052	6,255	1,237	4,459	1,317	3,090	2,377
1988	24,124	913	2,271	4,208	6,432	1,331	4,580	1,328	3,061	2,394
1989	24,386	984	2,321	4,149	6,667	1,361	4,474	1,468	2,962	2,385
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	1,206	14	147	383	163	203	65	80	151	3,860
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	1,751	15	193	556	203	354	130	105	195	4,559
1980	2,010	24	223	635	265	403	163	113	184	4,759
1981	2,205	24	236	655	323	375	196	133	263	4,660
1982	2,457	30	311	664	350	389	245	148	320	4,503
1983	2,537	32	358	716	441	250	250	165	325	4,612
1984	2,674	36	331	712	542	283	260	172	338	4,789
1985	2,770	46	308	745	511	299	272	226	363	4,769
1986	3,105	57	323	780	618	327	316	273	411	4,858
1987	3,290	53	395	755	621	326	384	295	461	4,722
1988	3,357	56	361	835	701	231	426	293	454	5,108
1989	3,552	63	388	807	742	322	425	314	491	5,335

1/ Master's granting-institutions were not surveyed in 1978.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-15. Full-time science/engineering graduate students in land-grant institutions by citizenship and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	90,468	66,323	9,266	4,157	4,396	1,945	7,444	16,439	5,981	16,695
1976	91,543	67,507	9,463	4,617	4,206	2,054	7,865	17,187	5,928	16,187
1977	91,421	67,243	9,518	4,762	4,101	1,986	8,057	17,224	5,718	15,877
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	92,508	66,684	9,634	4,678	3,906	2,250	8,035	16,896	5,636	15,649
1980	94,781	67,395	9,855	4,703	3,927	2,493	8,127	16,937	5,475	15,878
1981	96,320	67,990	10,011	4,857	4,138	2,763	8,353	16,907	5,453	15,508
1982	96,875	67,608	10,309	5,029	4,255	3,073	8,188	16,420	5,421	14,913
1983	98,985	68,487	10,647	5,273	4,439	3,459	8,100	16,557	5,332	14,680
1984	100,604	69,402	10,932	5,157	4,612	3,766	7,970	16,760	5,470	14,735
1985	101,141	69,532	11,113	4,960	4,831	4,466	7,526	16,603	5,519	14,514
1986	105,413	71,751	11,626	5,013	5,100	4,762	7,648	17,049	5,693	14,860
1987	105,887	71,806	11,901	4,618	5,531	4,828	7,546	17,049	5,609	14,724
1988	107,272	72,289	11,987	4,446	5,744	4,697	7,464	17,135	5,848	14,968
1989	109,469	73,811	12,100	4,512	5,933	4,823	7,281	17,600	5,972	15,590
	U.S. citizens									
1975 2/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 2/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 2/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 2/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	79,446	58,464	8,447	4,284	3,057	1,801	6,738	15,198	5,512	13,427
1980	73,534	54,684	7,748	4,063	2,569	1,668	6,273	14,470	5,262	12,631
1981	73,148	54,037	7,634	4,130	2,667	1,845	6,353	14,194	5,207	12,007
1982	72,890	53,386	7,890	4,168	2,660	2,113	6,241	13,733	5,163	11,418
1983	73,308	53,222	8,010	4,403	2,684	2,338	6,055	13,694	5,071	10,967
1984	74,088	53,468	8,072	4,354	2,737	2,410	5,934	13,805	5,206	10,950
1985	72,585	52,154	7,941	4,137	2,756	2,731	5,563	13,280	5,209	10,537
1986	73,839	52,824	8,014	4,093	2,853	2,905	5,489	13,420	5,417	10,633
1987	72,571	51,403	8,035	3,660	3,003	2,953	5,230	12,999	5,247	10,276
1988	72,455	51,123	8,031	3,431	3,147	2,682	5,156	12,758	5,441	10,477
1989	73,399	51,825	7,897	3,366	3,207	2,773	5,118	12,971	5,569	10,924
	Foreign students									
1975 2/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 2/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 2/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 2/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	13,062	8,220	1,187	394	849	449	1,297	1,698	124	2,222
1980	21,247	12,711	2,107	640	1,358	825	1,854	2,467	213	3,247
1981	23,172	13,953	2,377	727	1,471	918	2,000	2,713	246	3,501
1982	23,985	14,222	2,419	861	1,595	960	1,947	2,687	258	3,495
1983	25,677	15,265	2,637	870	1,755	1,121	2,045	2,863	261	3,713
1984	26,516	15,934	2,860	803	1,875	1,356	2,036	2,955	264	3,785
1985	28,556	17,378	3,172	823	2,075	1,735	1,963	3,323	310	3,977
1986	31,574	18,927	3,612	920	2,247	1,857	2,159	3,629	276	4,227
1987	33,316	20,403	3,866	958	2,528	1,875	2,316	4,050	362	4,448
1988	34,817	21,166	3,956	1,015	2,597	2,015	2,308	4,377	407	4,491
1989	36,070	21,986	4,203	1,146	2,726	2,050	2,163	4,629	403	4,666

See footnotes at end of table.

Table B-15. Full-time science/engineering graduate students in land-grant institutions by citizenship and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	17,910	502	1,739	3,566	4,046	1,772	2,522	881	2,882	6,235
1976	17,740	506	1,791	3,698	3,974	1,702	2,441	953	2,675	6,296
1977	17,746	478	1,836	3,869	3,825	1,596	2,395	988	2,759	6,432
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	18,848	470	2,008	4,118	3,820	1,863	2,717	1,089	2,763	6,976
1980	20,087	557	2,209	4,353	4,351	2,012	2,910	1,078	2,617	7,299
1981	21,252	608	2,400	4,369	4,724	1,740	3,301	1,198	2,912	7,078
1982	22,447	657	2,647	4,509	4,941	1,763	3,632	1,183	3,115	6,820
1983	23,717	774	2,814	4,822	5,530	1,330	4,133	1,261	3,053	6,781
1984	24,251	726	2,748	4,836	5,876	1,392	4,222	1,380	3,071	6,951
1985	24,473	783	2,633	4,744	6,100	1,464	4,215	1,487	3,047	7,136
1986	26,580	848	2,729	4,959	6,687	1,600	4,651	1,599	3,507	7,082
1987	26,982	886	2,844	4,807	6,876	1,563	4,843	1,612	3,551	7,099
1988	27,481	969	2,632	5,043	7,133	1,562	5,006	1,621	3,515	7,502
1989	27,938	1,047	2,709	4,956	7,409	1,683	4,899	1,782	3,453	7,720
	U.S. citizens									
1975 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	14,493	350	1,534	3,236	3,222	1,425	1,902	737	2,087	6,489
1980	12,170	308	1,320	2,696	2,647	1,361	1,677	570	1,591	6,680
1981	12,724	349	1,428	2,632	2,862	1,077	1,905	678	1,793	6,387
1982	13,367	388	1,581	2,752	2,983	1,097	2,051	653	1,862	6,137
1983	14,054	453	1,842	2,847	3,253	767	2,259	760	1,873	6,032
1984	14,435	445	1,793	2,782	3,587	819	2,315	821	1,873	6,185
1985	14,153	464	1,655	2,661	3,530	784	2,332	854	1,873	6,278
1986	14,886	531	1,753	2,694	3,571	838	2,520	899	2,080	6,129
1987	15,013	523	1,765	2,623	3,845	799	2,571	885	2,002	6,155
1988	14,885	564	1,517	2,803	3,822	805	2,569	861	1,944	6,447
1989	14,986	606	1,398	2,675	4,047	858	2,608	903	1,891	6,588
	Foreign students									
1975 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 2/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	4,355	120	474	882	598	438	815	352	676	487
1980	7,917	249	889	1,657	1,704	651	1,233	508	1,026	619
1981	8,528	259	972	1,737	1,862	663	1,396	520	1,119	691
1982	9,080	269	1,066	1,757	1,958	666	1,581	530	1,253	683
1983	9,663	321	972	1,975	2,277	563	1,874	501	1,180	749
1984	9,816	281	955	2,054	2,289	573	1,907	559	1,198	766
1985	10,320	319	978	2,083	2,570	680	1,883	633	1,174	858
1986	11,694	317	976	2,265	3,116	762	2,131	700	1,427	953
1987	11,969	363	1,079	2,184	3,031	764	2,272	727	1,549	944
1988	12,596	405	1,115	2,240	3,311	757	2,437	760	1,571	1,055
1989	12,952	441	1,311	2,281	3,362	825	2,291	879	1,562	1,132

1/ Master's granting-institutions were not surveyed in 1978.

2/ Distribution by citizenship was not requested before 1979.

NOTE: NA = not availble. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-16. Part-time science/engineering graduate students in land-grant institutions by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmos- pheric and ocean sciences	Mathe- matical sciences	Computer sciences	Agri- cultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	19,062	12,676	770	800	836	1,068	1,249	2,137	984	4,832
1976	20,008	13,103	871	834	854	1,004	1,272	2,257	1,038	4,973
1977	21,224	13,999	930	881	791	1,096	1,331	2,461	1,102	5,407
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	22,266	14,729	779	878	770	1,015	1,669	2,442	1,094	6,082
1980	23,563	15,383	761	975	745	1,229	1,610	2,504	1,367	6,192
1981	23,234	14,452	763	1,000	633	1,189	1,421	2,359	1,326	5,761
1982	25,317	15,233	844	1,075	667	1,273	1,664	2,532	1,348	5,830
1983	25,659	15,425	869	1,065	752	1,399	1,720	2,498	1,645	5,477
1984	24,994	15,499	851	1,172	849	1,627	1,599	2,355	1,660	5,386
1985	26,543	16,172	989	1,335	788	1,593	1,607	2,620	1,859	5,381
1986	26,559	15,636	963	1,234	856	1,496	1,502	2,405	1,702	5,478
1987	26,387	15,071	874	1,267	765	1,550	1,375	2,228	1,479	5,533
1988	27,061	15,757	972	1,281	907	1,772	1,330	2,303	1,712	5,480
1989	28,520	16,338	977	1,226	853	1,763	1,449	2,255	1,873	5,942
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	15,335	9,684	774	725	551	886	1,117	1,533	514	3,584
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	15,048	9,683	625	699	488	841	1,313	1,479	509	3,729
1980	15,265	9,739	592	763	507	910	1,268	1,461	585	3,653
1981	14,781	9,010	586	753	432	867	1,133	1,275	541	3,423
1982	15,966	9,435	647	788	451	949	1,279	1,354	570	3,397
1983	16,605	9,481	682	790	508	1,012	1,290	1,348	676	3,175
1984	15,907	9,503	647	845	549	1,191	1,226	1,243	641	3,161
1985	16,803	9,731	761	967	515	1,134	1,185	1,375	699	3,095
1986	16,831	9,405	743	913	548	1,080	1,106	1,276	651	3,088
1987	16,817	9,125	662	922	498	1,177	994	1,200	551	3,121
1988	16,920	9,459	737	934	604	1,345	940	1,192	670	3,037
1989	17,222	9,451	728	842	540	1,333	1,026	1,143	652	3,187
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	5,889	4,315	156	156	240	210	214	928	588	1,823
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	7,218	5,046	154	179	282	174	356	963	585	2,353
1980	8,298	5,644	169	212	238	319	342	1,043	782	2,539
1981	8,453	5,442	177	247	201	322	288	1,084	785	2,338
1982	9,351	5,798	197	287	216	324	385	1,178	778	2,433
1983	9,054	5,944	187	275	244	387	430	1,150	969	2,302
1984	9,087	5,996	204	327	300	436	373	1,112	1,019	2,225
1985	9,740	6,441	228	368	273	459	422	1,245	1,160	2,286
1986	9,728	6,231	220	321	308	416	396	1,129	1,051	2,390
1987	9,570	5,946	212	345	267	373	381	1,028	928	2,412
1988	10,141	6,298	235	347	303	427	390	1,111	1,042	2,443
1989	11,298	6,887	249	384	313	430	423	1,112	1,221	2,755

See footnotes at end of table.

Table B-16. Part-time science/engineering graduate students in land-grant institutions by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	5,066	138	351	953	1,409	563	805	131	716	1,320
1976	5,324	111	330	965	1,313	649	813	112	1,031	1,581
1977	5,463	110	338	923	1,527	768	771	96	930	1,762
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	5,262	96	266	812	1,410	782	736	137	1,023	2,275
1980	5,451	94	313	857	1,376	817	858	181	955	2,729
1981	5,743	101	335	866	1,357	827	823	120	1,314	3,039
1982	6,568	72	320	862	1,748	962	963	130	1,511	3,516
1983	7,394	185	345	963	1,975	979	1,049	142	1,756	2,840
1984	6,680	217	328	994	1,894	1,018	1,143	164	922	2,815
1985	7,401	239	382	1,068	2,277	1,309	1,052	173	901	2,970
1986	7,902	245	325	975	2,447	1,448	1,153	186	1,123	3,021
1987	8,139	217	284	978	2,781	1,434	1,197	176	1,072	3,177
1988	7,824	204	312	1,002	2,584	1,274	1,132	192	1,124	3,480
1989	8,214	206	290	1,091	2,603	1,456	1,072	178	1,318	3,968
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	5,228	108	319	886	1,472	701	741	93	908	423
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	4,895	95	230	758	1,358	693	686	122	953	470
1980	4,992	89	266	789	1,306	704	796	168	874	534
1981	5,205	98	279	800	1,281	661	754	106	1,226	566
1982	5,902	68	268	773	1,623	789	886	103	1,392	629
1983	6,645	176	309	843	1,821	814	961	112	1,609	479
1984	5,952	207	285	866	1,755	855	1,050	133	801	452
1985	6,557	229	330	920	2,085	1,126	955	132	780	515
1986	6,966	231	277	845	2,220	1,243	1,028	151	971	460
1987	7,151	203	237	842	2,520	1,214	1,092	133	910	541
1988	6,833	189	249	858	2,367	1,033	1,028	152	957	628
1989	7,154	193	245	926	2,350	1,207	983	139	1,111	617
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	235	2	19	37	55	67	30	3	22	1,339
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	367	1	36	54	52	89	50	15	70	1,805
1980	459	5	47	68	70	113	62	13	81	2,195
1981	538	3	56	66	76	166	69	14	88	2,473
1982	666	4	52	89	125	173	77	27	119	2,887
1983	749	9	36	120	154	165	88	30	147	2,361
1984	728	10	43	128	139	163	93	31	121	2,363
1985	844	10	52	148	192	183	97	41	121	2,455
1986	936	14	48	130	227	205	125	35	152	2,561
1987	998	14	47	136	261	220	105	43	162	2,636
1988	991	15	63	144	217	241	104	40	167	2,852
1989	1,060	13	45	165	253	249	89	39	207	3,351

1/ Master's granting-institutions were not surveyed in 1978.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-17. Science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	378,104	385,056	394,048	398,178	407,942	419,338	425,358	429,831	440,983
Total, science/engineering fields	334,059	340,791	349,598	352,075	360,744	370,605	375,672	378,329	386,607
Engineering, total	80,479	84,594	91,952	93,659	96,968	103,093	104,717	103,816	104,922
Aerospace	1,883	1,941	2,408	2,445	2,658	2,924	3,121	3,318	3,505
Agricultural	802	875	969	954	941	1,054	1,063	1,039	1,031
Biomedical	1,057	1,116	1,244	1,345	1,373	1,549	1,689	1,755	1,919
Chemical	6,496	7,189	7,563	7,373	7,150	7,012	7,111	6,618	6,411
Civil	14,515	14,523	15,314	15,584	15,265	15,379	14,957	15,077	15,073
Electrical	20,193	22,017	25,213	26,306	28,128	30,008	31,339	31,960	33,306
Engineering science	1,965	2,130	2,261	2,153	2,098	2,362	2,359	2,408	2,092
Industrial	10,026	9,870	9,621	9,820	11,104	12,160	12,750	11,940	11,750
Mechanical	10,618	11,467	12,911	13,855	14,157	15,740	16,304	16,233	16,184
Metallurgical/materials	3,125	3,124	3,447	3,657	3,938	4,170	4,309	4,272	4,546
Mining	462	449	524	502	489	512	513	489	449
Nuclear	1,283	1,301	1,203	1,234	1,220	1,265	1,279	1,303	1,323
Petroleum	521	586	737	744	782	747	818	742	665
Engineering, n.e.c.	7,533	8,006	8,537	7,687	7,665	8,211	7,105	6,662	6,668
Sciences, total	253,580	256,197	257,646	258,416	263,776	267,512	270,955	274,513	281,685
Physical sciences	27,382	28,199	29,466	30,064	30,995	32,260	32,738	32,972	33,584
Astronomy	597	632	618	639	671	689	722	731	789
Chemistry	16,347	17,015	17,801	17,756	18,309	18,745	18,824	18,578	18,806
Physics	10,150	10,306	10,811	11,335	11,677	12,443	12,810	13,312	13,627
Physical sciences, n.e.c.	288	246	236	334	338	383	382	351	362
Earth, atmospheric, and ocean sciences	14,422	15,174	15,544	15,612	15,545	15,163	14,522	14,032	13,812
Atmospheric sciences	882	889	896	907	964	961	952	940	912
Geosciences	8,808	9,621	10,321	10,370	10,294	9,819	8,998	8,495	8,043
Oceanography	2,082	2,091	2,063	2,102	2,081	2,128	2,127	2,033	2,198
Earth, atm. & oc. sci., n.e.c.	2,650	2,573	2,264	2,233	2,206	2,255	2,445	2,564	2,659
Mathematical sciences	15,915	17,199	17,397	17,478	17,613	17,990	18,602	19,193	19,473
Computer sciences	16,437	19,812	23,616	25,810	29,844	31,425	32,137	32,787	32,914
Agricultural sciences	12,100	12,314	12,290	12,062	11,380	11,329	11,004	11,000	11,039
Biological sciences	46,979	46,310	46,055	46,171	46,538	47,216	47,401	48,273	49,662
Anatomy	1,072	1,074	1,037	1,029	993	973	1,027	1,068	1,109
Biochemistry	4,061	4,124	4,234	4,490	4,691	4,909	4,848	4,958	5,169
Biology	14,203	13,397	13,071	12,905	12,732	12,707	12,508	12,602	12,988
Biometry/epidemiology	1,182	1,166	1,156	1,004	1,360	1,441	1,506	1,631	1,677
Biophysics	463	440	450	433	441	547	591	592	655
Botany	3,498	3,644	3,450	3,404	3,335	3,290	3,140	3,083	2,998
Cell biology	1,018	1,143	1,182	1,256	1,429	1,716	1,978	2,083	2,215
Ecology	1,101	1,051	1,007	1,088	1,028	1,012	963	1,028	1,109
Entomology/parasitology	1,664	1,540	1,475	1,438	1,342	1,306	1,244	1,240	1,181
Genetics	937	990	1,035	1,059	1,120	1,262	1,314	1,289	1,365
Microbiology	4,070	4,130	4,262	4,326	4,447	4,374	4,492	4,810	4,857
Nutrition	4,355	4,359	4,351	4,277	4,314	4,321	4,288	4,244	4,277
Pathology	1,444	1,460	1,462	1,468	1,355	1,398	1,442	1,400	1,452
Pharmacology	2,024	2,084	2,140	2,122	2,181	2,159	2,154	2,210	2,349
Physiology	2,144	2,058	1,994	2,160	2,211	2,220	2,213	2,220	2,206
Zoology	2,625	2,503	2,430	2,303	2,135	2,083	2,113	2,034	2,089
Biosciences, n.e.c.	1,118	1,147	1,319	1,409	1,424	1,498	1,580	1,781	1,966
Psychology	40,691	40,098	41,039	41,074	41,308	41,551	42,785	44,277	46,248
Social sciences	79,654	77,091	72,239	70,145	70,553	70,578	71,766	71,979	74,953
Agricultural economics	2,262	2,267	2,295	2,279	2,268	2,248	2,203	2,259	2,276
Anthropology	6,118	5,948	5,644	5,590	5,621	5,795	5,825	5,935	6,154
Economics (except agricultural)	13,344	13,735	13,162	12,599	12,502	12,198	12,153	12,174	12,291
Geography	3,187	3,166	3,060	3,035	2,936	3,055	3,223	3,208	3,504
History and philosophy of science	248	256	253	274	272	266	294	288	314
Linguistics	3,139	2,803	3,022	3,160	3,055	3,109	3,282	3,255	3,355
Political science	30,791	29,907	28,069	25,939	27,035	27,310	27,667	27,875	29,321
Sociology	7,816	7,246	6,920	6,740	6,567	6,504	6,945	7,058	7,352
Sociology/anthropology	1,110	1,133	1,200	1,075	1,034	1,021	982	991	1,022
Social sciences, n.e.c.	11,639	10,630	8,614	9,454	9,263	9,072	9.192	8,936	9,364
Total, health fields	44,045	44,265	44,450	46,103	47,198	48,733	49,686	51,502	54,376
Dentistry	942	836	776	850	835	938	1,057	1,085	1,157
Neurology	191	204	261	317	337	383	494	605	690
Nursing	15,703	16,254	16,945	17,987	17,962	18,424	18,479	18,987	19,882
Pharmaceutical sciences	2,549	2,519	2,570	2,447	2,479	2,603	2,530	2,535	2,771
Preventive medicine/community health	7,226	6,816	6,679	6,841	7,292	7,226	7,560	7,671	7,744
Speech pathology/audiology	8,596	8,683	7,970	7,897	8,136	8,066	7,607	7,844	8,269
Veterinary sciences	481	471	466	557	637	630	731	752	801
Clinical medicine, n.e.c.	1,610	1,747	1,644	1,570	1,732	1,709	1,797	1,879	1,882
Health related, n.e.c.	6,747	6,735	7,139	7,637	7,788	8,754	9,431	10,144	11,180

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-18. Science/engineering graduate students in all institutions by geographic distribution: 1981-89

Division and State	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all institutions	378,104	385,056	394,048	398,178	407,942	419,338	425,358	429,831	440,983
New England	29,320	30,215	31,124	29,020	29,898	30,441	30,474	33,313	32,778
Connecticut	6,115	6,718	6,898	6,105	6,391	6,356	6,581	7,049	7,213
Maine	395	416	509	580	523	538	614	649	667
Massachusetts	19,600	19,796	20,262	19,034	19,654	20,044	19,716	21,770	20,965
New Hampshire	771	839	857	803	829	878	882	1,103	1,131
Rhode Island	1,868	1,806	1,924	1,834	1,883	1,993	2,074	2,068	2,138
Vermont	571	640	674	664	618	632	607	674	664
Middle Atlantic	70,484	71,088	73,171	69,274	70,150	71,912	71,523	77,524	78,800
New Jersey	10,367	10,119	10,251	10,829	11,038	11,052	11,401	11,921	11,645
New York	42,010	42,754	44,223	41,347	41,744	43,066	42,385	45,784	46,524
Pennsylvania	18,107	18,215	18,697	17,098	17,368	17,794	17,737	19,819	20,631
East North Central	64,428	65,599	67,934	64,963	65,844	68,712	71,283	75,890	78,219
Illinois	18,906	19,024	19,697	18,919	19,697	20,335	21,260	22,865	23,543
Indiana	8,065	8,281	8,567	7,651	7,157	7,916	8,249	8,787	9,357
Michigan	12,385	12,693	13,229	13,613	13,757	14,617	14,813	14,935	15,943
Ohio	16,661	16,976	17,750	16,921	17,484	18,017	18,954	20,284	19,995
Wisconsin	8,411	8,625	8,691	7,859	7,749	7,827	8,007	9,019	9,381
West North Central	24,126	24,817	25,797	23,846	24,385	24,902	25,139	27,775	28,993
Iowa	4,231	4,490	4,749	4,517	4,651	4,810	4,818	5,139	5,192
Kansas	4,836	4,736	5,106	4,397	4,257	4,265	4,418	4,758	5,164
Minnesota	5,544	5,638	5,846	5,255	5,641	5,570	5,373	6,986	7,246
Missouri	5,734	6,132	6,132	5,830	5,940	6,339	6,521	6,748	7,150
Nebraska	2,196	2,143	2,229	2,165	2,139	2,130	2,238	2,346	2,380
North Dakota	913	946	946	906	949	970	915	947	950
South Dakota	672	732	789	776	808	818	856	851	911
South Atlantic	54,125	54,799	52,626	53,138	55,160	57,869	59,771	63,274	65,417
Delaware	1,135	1,173	1,180	1,112	1,150	1,189	1,303	1,198	1,236
District of Columbia	9,355	8,370	7,847	8,312	8,679	9,246	9,323	8,876	8,273
Florida	10,471	10,876	9,300	9,100	9,998	10,052	10,897	12,267	12,838
Georgia	5,950	6,117	5,978	6,290	6,005	6,386	6,726	7,278	7,599
Maryland	7,364	7,316	7,755	7,671	7,693	8,059	8,078	9,043	9,620
North Carolina	7,118	7,671	8,015	7,858	7,829	8,353	8,450	9,065	9,597
South Carolina	2,813	2,940	3,021	2,996	3,007	3,326	3,385	3,309	3,607
Virginia	7,047	7,164	7,311	7,740	8,823	9,321	9,772	10,233	10,629
West Virginia	2,872	3,172	2,219	2,059	1,976	1,937	1,837	2,005	2,018
East South Central	14,089	14,185	14,819	14,439	14,651	15,248	15,529	17,839	18,864
Alabama	3,570	3,579	3,683	3,824	4,187	4,506	4,830	5,337	5,747
Kentucky	3,242	3,301	3,375	2,871	2,779	2,783	2,935	3,999	4,142
Mississippi	1,972	2,108	2,288	2,512	2,443	2,573	2,505	2,680	2,751
Tennessee	5,305	5,197	5,473	5,232	5,242	5,386	5,259	5,823	6,224
West South Central	32,049	34,366	37,051	34,498	34,873	35,408	35,207	37,689	39,983
Arkansas	1,576	1,682	1,720	1,182	1,181	1,161	1,180	1,723	1,799
Louisiana	4,234	4,483	4,806	4,848	4,814	4,648	4,564	4,745	4,877
Oklahoma	3,447	3,618	3,940	3,881	4,008	4,105	4,360	4,172	4,330
Texas	22,792	24,583	26,585	24,587	24,870	25,494	25,103	27,049	28,977
Mountain	21,279	22,607	22,751	22,266	23,302	24,110	24,871	25,218	25,617
Arizona	5,344	6,140	6,147	6,212	6,743	6,834	6,938	7,254	7,239
Colorado	6,691	6,735	6,425	6,150	6,468	7,108	7,440	7,367	7,542
Idaho	913	937	1,004	1,008	1,041	1,035	1,173	1,225	1,405
Montana	856	1,035	1,094	1,086	1,049	980	970	1,050	1,065
Nevada	678	600	722	561	547	536	642	881	1,056
New Mexico	2,591	2,595	2,741	2,549	2,655	2,723	2,926	2,894	2,737
Utah	3,476	3,763	3,783	3,921	3,986	4,154	4,043	3,850	3,771
Wyoming	730	802	835	779	813	740	739	697	802
Pacific	66,337	65,345	66,480	60,807	63,430	64,313	65,154	69,012	69,935
Alaska	541	564	604	352	381	399	387	537	580
California	54,149	53,437	54,379	49,943	52,408	53,152	53,995	56,533	57,502
Hawaii	1,806	1,828	1,782	1,702	1,705	1,820	1,822	1,829	1,857
Oregon	3,226	3,217	3,358	3,234	3,262	3,429	3,454	3,634	3,651
Washington	6,615	6,299	6,357	5,576	5,674	5,513	5,496	6,479	6,345
Outlying Areas	1,867	2,035	2,295	2,436	2,552	2,520	2,298	2,297	2,377
State, Unknown 2/...............	0	0	0	23,491	23,697	23,903	24,109	0	0

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

2/ These numbers represent the total of all nonsampled master's-granting institutions.

SOURCE: National Science Foundation, SRS

Table B-19. Male science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	245,377	247,962	253,112	254,631	260,378	266,942	270,076	268,328	272,173
Total, science/engineering fields	233,604	236,651	242,265	243,705	249,097	255,390	257,754	256,167	259,340
Engineering, total	72,548	75,621	81,968	83,118	85,630	90,419	91,618	90,473	91,159
Aerospace	1,816	1,831	2,283	2,311	2,490	2,722	2,895	3,086	3,260
Agricultural	758	818	896	872	863	970	967	953	944
Biomedical	877	897	974	1,054	1,082	1,203	1,292	1,316	1,450
Chemical	5,718	6,288	6,547	6,401	6,146	5,973	5,957	5,543	5,387
Civil	12,778	12,614	13,307	13,411	12,983	13,072	12,773	12,698	12,587
Electrical	18,917	20,466	23,157	24,112	25,719	27,104	28,263	28,705	29,818
Engineering science	1,764	1,864	1,971	1,861	1,858	2,065	2,068	2,135	1,844
Industrial	8,466	8,216	8,044	8,082	9,159	9,897	10,395	9,695	9,519
Mechanical	9,987	10,748	12,106	12,899	13,146	14,578	15,015	14,812	14,780
Metallurgical/materials	2,735	2,704	2,999	3,189	3,338	3,507	3,604	3,540	3,752
Mining	423	409	477	458	459	476	473	441	399
Nuclear	1,199	1,215	1,119	1,146	1,113	1,142	1,151	1,176	1,182
Petroleum	469	544	665	684	716	699	764	693	637
Engineering, n.e.c.	6,641	7,007	7,423	6,638	6,558	7,011	6,001	5,680	5,600
Sciences, total	161,056	161,030	160,297	160,587	163,467	164,971	166,136	165,694	168,181
Physical sciences	22,366	22,776	23,586	23,904	24,483	25,395	25,620	25,473	25,796
Astronomy	506	531	526	541	563	568	602	591	649
Chemistry	12,544	12,855	13,289	13,116	13,518	13,719	13,648	13,112	13,157
Physics	9,133	9,238	9,609	10,043	10,179	10,866	11,137	11,561	11,760
Physical sciences, n.e.c.	183	152	162	204	223	242	233	209	230
Earth, atmospheric, and ocean sciences	10,945	11,393	11,593	11,694	11,571	11,183	10,708	10,164	9,887
Atmospheric sciences	758	764	766	769	807	782	784	777	734
Geosciences	6,746	7,318	7,808	7,882	7,810	7,463	6,834	6,383	6,065
Oceanography	1,529	1,514	1,497	1,501	1,471	1,461	1,493	1,388	1,478
Earth, atm. & oc. sci., n.e.c.	1,912	1,797	1,522	1,542	1,483	1,477	1,597	1,616	1,610
Mathematical sciences	11,419	12,109	12,184	12,295	12,227	12,501	12,957	13,370	13,408
Computer sciences	12,228	14,366	16,968	18,905	22,387	23,677	24,233	24,564	24,878
Agricultural sciences	9,370	9,314	9,183	[illegible]	8,422	8,384	8,061	7,927	7,896
Biological sciences	28,210	27,021	26,572	26,510	26,482	26,581	26,700	26,752	27,134
Anatomy	683	669	632	605	569	560	583	603	619
Biochemistry	2,694	2,630	2,658	2,811	2,943	3,014	2,939	2,950	3,113
Biology	8,651	7,873	7,534	7,400	7,237	7,166	7,196	7,093	7,188
Biometry/epidemiology	656	561	547	472	640	667	725	748	724
Biophysics	338	330	338	326	331	410	450	443	493
Botany	2,285	2,329	2,201	2,165	2,095	2,119	1,944	1,915	1,854
Cell biology	651	726	774	789	911	1,044	1,207	1,233	1,278
Ecology	730	684	666	741	661	630	588	622	661
Entomology/parasitology	1,308	1,158	1,090	1,066	992	948	906	881	817
Genetics	470	461	512	547	597	665	673	660	675
Microbiology	2,309	2,318	2,385	2,408	2,490	2,429	2,475	2,632	2,590
Nutrition	1,386	1,368	1,326	1,319	1,349	1,307	1,341	1,234	1,253
Pathology	882	872	883	872	787	825	836	826	843
Pharmacology	1,330	1,356	1,375	1,324	1,345	1,315	1,275	1,328	1,349
Physiology	1,452	1,367	1,297	1,388	1,375	1,366	1,378	1,357	1,313
Zoology	1,718	1,651	1,609	1,483	1,372	1,307	1,316	1,246	1,296
Biosciences, n.e.c.	667	668	745	794	788	809	868	981	1,068
Psychology	17,902	16,980	16,687	16,216	15,778	15,459	15,708	15,605	15,966
Social sciences	48,616	47,071	43,524	42,100	42,117	41,791	42,149	41,839	43,216
Agricultural economics	1,791	1,804	1,807	1,791	1,761	1,747	1,696	1,713	1,694
Anthropology	2,791	2,677	2,438	2,439	2,507	2,457	2,479	2,497	2,564
Economics (except agricultural)	10,139	10,237	9,939	9,544	9,416	9,147	9,074	9,010	8,957
Geography	2,198	2,195	2,051	2,050	1,988	2,071	2,130	2,153	2,308
History and philosophy of science	159	167	161	187	180	169	198	184	198
Linguistics	1,349	1,180	1,217	1,259	1,198	1,252	1,305	1,297	1,345
Political science	19,255	18,631	17,290	16,172	16,506	16,548	16,713	16,449	17,230
Sociology	3,780	3,376	3,255	3,120	3,085	2,965	3,135	3,245	3,383
Sociology/anthropology	544	553	586	525	496	482	472	443	454
Social sciences, n.e.c.	6,610	6,251	4,780	5,013	4,980	4,953	4,947	4,848	5,083
Total, health fields	11,773	11,311	10,847	10,926	11,281	11,552	12,322	12,161	12,833
Dentistry	716	676	607	664	648	731	776	791	813
Neurology	131	140	189	208	208	237	308	359	411
Nursing	730	717	747	786	795	815	1,098	909	1,073
Pharmaceutical sciences	1,797	1,751	1,729	1,588	1,611	1,663	1,545	1,503	1,633
Preventive medicine/community health	3,385	2,986	2,821	2,793	2,973	3,049	3,384	3,181	2,912
Speech pathology/audiology	1,186	1,220	1,053	1,079	1,126	967	777	867	839
Veterinary sciences	304	297	289	346	401	394	453	452	470
Clinical medicine, n.e.c.	865	954	844	767	793	806	875	907	954
Health related, n.e.c.	2,659	2,570	2,568	2,695	2,726	2,890	3,106	3,192	3,728

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-20. Female science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	132,727	137,094	140,936	143,547	147,564	152,396	155,282	161,503	168,810
Total, science/engineering fields	100,455	104,140	107,333	108,370	111,647	115,215	117,918	122,162	127,267
Engineering, total	7,931	8,973	9,984	10,541	11,338	12,674	13,099	13,343	13,763
Aerospace	67	110	125	134	168	202	226	232	245
Agricultural	44	57	73	82	78	84	96	86	87
Biomedical	180	219	270	291	291	346	397	439	469
Chemical	778	901	1,016	972	1,004	1,039	1,154	1,075	1,024
Civil	1,737	1,909	2,007	2,173	2,282	2,307	2,184	2,379	2,486
Electrical	1,276	1,551	2,056	2,194	2,409	2,904	3,076	3,255	3,488
Engineering science	201	266	290	292	240	297	291	273	248
Industrial	1,560	1,654	1,577	1,738	1,945	2,263	2,355	2,245	2,231
Mechanical	631	719	805	956	1,011	1,162	1,289	1,421	1,404
Metallurgical/materials	390	420	448	468	600	663	705	732	794
Mining	39	40	47	44	30	36	40	48	50
Nuclear	84	86	84	88	107	123	128	127	141
Petroleum	52	42	72	60	66	48	54	49	28
Engineering, n.e.c.	892	999	1,114	1,049	1,[illegible]7	1,200	1,104	982	1,068
Sciences, total	92,524	95,167	97,349	97,829	100,309	102,541	104,819	108,819	113,504
Physical sciences	5,016	5,423	5,880	6,160	6,512	6,865	7,118	7,499	7,788
Astronomy	91	101	92	98	108	121	120	140	140
Chemistry	3,803	4,160	4,512	4,640	4,791	5,026	5,176	5,466	5,649
Physics	1,017	1,068	1,202	1,292	1,498	1,577	1,673	1,751	1,867
Physical sciences, n.e.c.	105	94	74	130	115	141	149	142	132
Earth, atmospheric, and ocean sciences	3,477	3,781	3,951	3,918	3,974	3,980	3,814	3,868	3,925
Atmospheric sciences	124	125	130	138	157	179	168	163	178
Geosciences	2,062	2,303	2,513	2,488	2,484	2,356	2,164	2,112	1,978
Oceanography	553	577	566	601	610	667	634	645	720
Earth, atm. & oc. sci., n.e.c.	738	776	742	691	723	778	848	948	1,049
Mathematical sciences	4,496	5,090	5,213	5,183	5,386	5,489	5,645	5,823	6,065
Computer sciences	4,209	5,446	6,648	6,905	7,457	7,748	7,904	8,223	8,036
Agricultural sciences	2,730	3,000	3,107	3,099	2,958	2,945	2,943	3,073	3,143
Biological sciences	18,769	19,289	19,483	19,661	20,056	20,635	20,701	21,521	22,528
Anatomy	389	405	405	424	424	413	444	465	490
Biochemistry	1,367	1,494	1,576	1,679	1,748	1,895	1,909	2,008	2,056
Biology	5,552	5,524	5,537	5,505	5,495	5,541	5,312	5,509	5,800
Biometry/epidemiology	526	605	609	532	720	774	781	883	953
Biophysics	125	110	112	107	110	137	141	149	162
Botany	1,213	1,315	1,249	1,239	1,240	1,171	1,196	1,168	1,144
Cell biology	367	417	408	467	518	672	771	850	937
Ecology	371	367	341	347	367	382	375	406	448
Entomology/parasitology	356	382	385	372	350	358	338	359	364
Genetics	467	529	523	512	523	597	641	629	690
Microbiology	1,761	1,812	1,877	1,918	1,957	1,945	2,017	2,178	2,267
Nutrition	2,969	2,991	3,025	2,958	2,965	3,014	2,947	3,010	3,024
Pathology	562	588	579	596	568	573	606	574	609
Pharmacology	694	728	765	798	836	844	879	882	1,000
Physiology	692	691	697	772	836	854	835	863	893
Zoology	907	852	821	820	763	776	797	788	793
Biosciences, n.e.c.	451	479	574	615	636	689	712	800	898
Psychology	22,789	23,118	24,352	24,858	25,530	26,092	27,077	28,672	30,282
Social sciences	31,038	30,020	28,715	28,045	28,436	28,787	29,617	30,140	31,737
Agricultural economics	471	463	488	488	507	501	507	546	582
Anthropology	3,327	3,271	3,206	3,151	3,114	3,338	3,346	3,438	3,590
Economics (except agricultural)	3,205	3,498	3,223	3,055	3,086	3,051	3,079	3,164	3,334
Geography	989	971	1,009	985	948	984	1,093	1,055	1,196
History and philosophy of science	89	89	92	87	92	97	96	104	116
Linguistics	1,790	1,623	1,805	1,901	1,857	1,857	1,977	1,958	2,010
Political science	11,536	11,276	10,779	9,767	10,529	10,762	10,954	11,426	12,091
Sociology	4,036	3,870	3,665	3,620	3,482	3,539	3,810	3,813	3,969
Sociology/anthropology	566	580	614	550	538	539	510	548	568
Social sciences, n.e.c.	5,029	4,379	3,834	4,441	4,283	4,119	4,245	4,088	4,281
Total, health fields	32,272	32,954	33,603	35,177	35,917	37,181	37,364	39,341	41,543
Dentistry	226	160	169	186	187	207	281	294	344
Neurology	60	64	72	109	129	146	186	246	279
Nursing	14,973	15,537	16,198	17,201	17,167	17,609	17,381	18,078	18,809
Pharmaceutical sciences	752	768	841	859	868	940	985	1,032	1,138
Preventive medicine/community health	3,841	3,830	3,858	4,048	4,319	4,177	4,176	4,490	4,832
Speech pathology/audiology	7,410	7,463	6,917	6,818	7,010	7,099	6,830	6,977	7,430
Veterinary sciences	177	174	177	211	236	236	278	300	331
Clinical medicine, n.e.c.	745	793	800	803	939	903	922	972	928
Health related, n.e.c.	4,088	4,165	4,571	4,942	5,062	5,864	6,325	6,952	7,452

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-21. Science/engineering graduate students in public institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	251,936	259,317	267,298	271,688	276,597	286,509	291,446	295,493	307,103
Total, science/engineering fields	221,349	228,042	235,988	239,180	243,416	251,714	255,384	258,244	267,224
Engineering, total	48,834	53,123	57,693	58,783	61,299	66,011	68,833	68,995	71,121
Aerospace	1,322	1,332	1,716	1,775	1,941	2,158	2,332	2,435	2,584
Agricultural	758	821	916	900	888	1,003	1,015	994	981
Biomedical	598	648	702	759	768	944	1,056	1,104	1,208
Chemical	4,265	4,822	5,057	4,959	4,841	4,805	4,807	4,557	4,470
Civil	9,722	9,966	10,715	11,055	10,919	11,009	11,322	11,428	11,497
Electrical	10,977	12,329	13,675	14,328	15,994	17,645	19,087	19,382	20,288
Engineering science	1,184	1,260	1,367	1,228	1,139	1,296	1,293	1,292	1,272
Industrial	4,563	4,940	4,726	5,044	5,804	6,304	6,470	6,680	7,448
Mechanical	6,717	7,431	8,470	9,056	9,494	10,642	11,231	11,150	11,077
Metallurgical/materials	1,818	1,850	2,026	2,211	2,369	2,574	2,664	2,614	2,866
Mining	380	377	456	434	424	442	443	421	389
Nuclear	993	1,018	963	1,011	1,009	1,058	1,075	1,092	1,107
Petroleum	271	321	464	496	567	592	632	585	531
Engineering, n.e.c.	5,266	6,008	6,440	5,527	5,142	5,539	5,406	5,261	5,403
Sciences, total	172,515	174,919	178,295	180,397	182,117	185,703	186,551	189,249	196,103
Physical sciences	19,263	20,117	21,019	21,459	22,046	23,197	23,566	23,804	24,280
Astronomy	393	420	419	433	442	469	492	495	516
Chemistry	11,681	12,303	12,906	12,852	13,167	13,563	13,647	13,497	13,685
Physics	6,914	7,148	7,458	7,840	8,123	8,826	9,116	9,501	9,738
Physical sciences, n.e.c.	275	246	236	334	314	339	311	311	341
Earth, atmospheric, and ocean sciences	12,069	12,727	13,058	13,149	13,065	12,779	12,232	11,786	11,574
Atmospheric sciences	790	791	843	856	906	903	892	887	883
Geosciences	7,236	7,982	8,556	8,585	8,561	8,176	7,488	7,043	6,663
Oceanography	1,844	1,798	1,759	1,780	1,707	1,777	1,809	1,757	1,841
Earth, atm. & oc. sci., n.e.c.	2,199	2,156	1,900	1,928	1,891	1,923	2,043	2,099	2,187
Mathematical sciences	10,963	12,105	12,344	12,600	12,917	13,580	14,155	14,691	15,089
Computer sciences	9,878	11,962	14,358	15,412	17,403	18,325	18,323	18,807	19,327
Agricultural sciences	11,756	11,978	11,941	11,735	11,033	10,998	10,680	10,654	10,710
Biological sciences	35,040	34,177	34,345	34,509	34,682	35,135	35,037	35,718	36,714
Anatomy	704	671	694	689	655	636	662	714	769
Biochemistry	2,659	2,727	2,848	3,017	3,208	3,387	3,291	3,402	3,486
Biology	10,034	9,176	9,364	9,245	9,236	9,198	9,110	9,244	9,583
Biometry/epidemiology	672	632	641	657	718	828	796	911	960
Biophysics	273	250	245	220	260	317	356	343	382
Botany	3,216	3,365	3,183	3,174	3,115	3,058	2,897	2,828	2,739
Cell biology	598	635	621	705	742	909	1,063	1,167	1,255
Ecology	1,006	978	926	1,005	955	937	885	916	974
Entomology/parasitology	1,604	1,490	1,426	1,383	1,290	1,256	1,177	1,178	1,115
Genetics	643	679	713	717	779	901	948	909	936
Microbiology	3,052	3,066	3,198	3,215	3,363	3,287	3,352	3,618	3,618
Nutrition	3,457	3,408	3,407	3,350	3,368	3,431	3,459	3,434	3,517
Pathology	919	930	971	966	945	953	1,004	945	995
Pharmacology	1,356	1,419	1,456	1,469	1,493	1,501	1,511	1,560	1,624
Physiology	1,491	1,422	1,396	1,487	1,510	1,489	1,488	1,476	1,515
Zoology	2,432	2,333	2,263	2,157	2,003	1,961	1,994	1,915	1,962
Biosciences, n.e.c.	924	996	993	1,053	1,042	1,086	1,044	1,158	1,284
Psychology	23,865	23,392	24,125	24,249	24,486	24,591	24,840	25,782	26,934
Social sciences	49,681	48,461	47,105	47,284	46,485	47,098	47,718	48,007	51,475
Agricultural economics	2,160	2,171	2,204	2,175	2,168	2,171	2,124	2,151	2,165
Anthropology	4,442	4,293	4,061	4,072	4,081	4,141	4,192	4,284	4,503
Economics (except agricultural)	8,022	8,444	8,103	7,878	7,801	7,827	7,684	7,715	7,802
Geography	2,911	2,933	2,840	2,824	2,717	2,871	3,036	3,013	3,318
History and philosophy of science	141	148	141	153	138	134	134	149	154
Linguistics	1,969	1,963	2,095	2,127	1,983	2,073	2,195	2,199	2,326
Political science	17,450	16,841	15,995	15,946	15,941	16,366	16,441	16,998	18,608
Sociology	5,461	5,168	4,998	4,960	4,786	4,825	5,167	5,248	5,502
Sociology/anthropology	634	638	610	600	582	613	614	678	724
Social sciences, n.e.c.	6,491	5,862	6,058	6,549	6,288	6,077	6,131	5,572	6,373
Total, health fields	30,587	31,275	31,310	32,508	33,181	34,795	36,062	37,249	39,879
Dentistry	648	611	541	600	562	689	809	833	898
Neurology	131	139	149	183	204	237	295	378	402
Nursing	10,816	11,501	12,121	12,835	12,673	13,647	13,878	14,454	15,048
Pharmaceutical sciences	1,723	1,726	1,719	1,725	1,785	1,829	1,803	1,871	2,095
Preventive medicine/community health	4,593	4,110	4,094	4,161	4,439	4,446	4,827	4,906	5,077
Speech pathology/audiology	7,299	7,474	6,701	6,681	6,689	6,792	6,402	6,600	6,916
Veterinary sciences	410	406	401	481	551	548	646	663	718
Clinical medicine, n.e.c.	1,059	1,174	1,088	1,076	1,196	1,170	1,201	1,258	1,291
Health related, n.e.c.	3,908	4,134	4,496	4,766	5,082	5,437	6,201	6,286	7,434

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-22. Science/engineering graduate students in private institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	126,168	125,739	126,750	126,490	131,345	132,829	133,912	134,338	133,880
Total, science/engineering fields	112,710	112,749	113,610	112,895	117,328	118,891	120,288	120,085	119,383
Engineering, total	31,645	31,471	34,259	34,876	35,669	37,082	35,884	34,821	33,801
Aerospace	561	609	692	670	717	766	789	883	921
Agricultural	44	54	53	54	53	51	48	45	50
Biomedical	459	468	542	586	605	605	633	651	711
Chemical	2,231	2,367	2,506	2,414	2,309	2,207	2,304	2,061	1,941
Civil	4,793	4,557	4,599	4,529	4,346	4,370	3,635	3,649	3,576
Electrical	9,216	9,688	11,538	11,978	12,134	12,363	12,252	12,578	13,018
Engineering science	781	870	894	925	959	1,066	1,066	1,116	820
Industrial	5,463	4,930	4,895	4,776	5,300	5,856	6,280	5,260	4,302
Mechanical	3,901	4,036	4,441	4,799	4,663	5,098	5,073	5,083	5,107
Metallurgical/materials	1,307	1,274	1,421	1,446	1,569	1,596	1,645	1,658	1,680
Mining	82	72	68	68	65	70	70	68	60
Nuclear	290	283	240	223	211	207	204	211	216
Petroleum	250	265	273	248	215	155	186	157	134
Engineering, n.e.c.	2,267	1,998	2,097	2,160	2,523	2,672	1,699	1,401	1,265
Sciences, total	81,065	81,278	79,351	78,019	81,659	81,809	84,404	85,264	85,582
Physical sciences	8,119	8,082	8,447	8,605	8,949	9,063	9,172	9,168	9,304
Astronomy	204	212	199	206	229	220	230	236	273
Chemistry	4,666	4,712	4,895	4,904	5,142	5,182	5,177	5,081	5,121
Physics	3,236	3,158	3,353	3,495	3,554	3,617	3,694	3,811	3,889
Physical sciences, n.e.c.	13	0	0	0	24	44	71	40	21
Earth, atmospheric, and ocean sciences	2,353	2,447	2,486	2,463	2,480	2,384	2,290	2,246	2,238
Atmospheric sciences	92	98	53	51	58	58	60	53	29
Geosciences	1,572	1,639	1,765	1,785	1,733	1,643	1,510	1,452	1,380
Oceanography	238	293	304	322	374	351	318	276	357
Earth, atm. & oc. sci., n.e.c.	451	417	364	305	315	332	402	465	472
Mathematical sciences	4,952	5,094	5,053	4,878	4,696	4,410	4,447	4,502	4,384
Computer sciences	6,559	7,850	9,258	10,398	12,441	13,100	13,814	13,980	13,587
Agricultural sciences	344	336	349	327	347	331	324	346	329
Biological sciences	11,939	12,133	11,710	11,662	11,856	12,081	12,364	12,555	12,948
Anatomy	368	403	343	340	338	337	365	354	340
Biochemistry	1,402	1,397	1,386	1,473	1,483	1,522	1,557	1,556	1,683
Biology	4,169	4,221	3,707	3,660	3,496	3,509	3,398	3,358	3,405
Biometry/epidemiology	510	534	515	347	642	613	710	720	717
Biophysics	190	190	205	213	181	230	235	249	273
Botany	282	279	267	230	220	232	243	255	259
Cell biology	420	508	561	551	687	807	915	916	960
Ecology	95	73	81	83	73	75	78	112	135
Entomology/parasitology	60	50	49	55	52	50	67	62	66
Genetics	294	311	322	342	341	361	366	380	429
Microbiology	1,018	1,064	1,064	1,111	1,084	1,087	1,140	1,192	1,239
Nutrition	898	951	944	927	946	890	829	810	760
Pathology	525	530	491	502	410	445	438	455	457
Pharmacology	668	665	684	653	688	658	643	650	725
Physiology	653	636	598	673	701	731	725	744	691
Zoology	193	170	167	146	132	122	119	119	127
Biosciences, n.e.c.	194	151	326	356	382	412	536	623	682
Psychology	16,826	16,706	16,914	16,825	16,822	16,960	17,945	18,495	19,314
Social sciences	29,973	28,630	25,134	22,861	24,068	23,480	24,048	23,972	23,478
Agricultural economics	102	96	91	104	100	77	79	108	111
Anthropology	1,676	1,655	1,583	1,518	1,540	1,654	1,633	1,651	1,651
Economics (except agricultural)	5,322	5,291	5,059	4,721	4,701	4,371	4,469	4,459	4,489
Geography	276	233	220	211	219	184	187	195	186
History and philosophy of science	107	108	112	121	134	132	160	139	160
Linguistics	1,170	840	927	1,033	1,072	1,036	1,087	1,056	1,029
Political science	13,341	13,066	12,074	9,993	11,094	10,944	11,226	10,877	10,713
Sociology	2,355	2,078	1,922	1,780	1,781	1,679	1,778	1,810	1,850
Sociology/anthropology	476	495	590	475	452	408	368	313	298
Social sciences, n.e.c.	5,148	4,768	2,556	2,905	2,975	2,995	3,061	3,364	2,991
Total, health fields	13,458	12,990	13,140	13,595	14,017	13,938	13,624	14,253	14,497
Dentistry	294	225	235	250	273	249	248	252	259
Neurology	60	65	112	134	133	146	199	227	288
Nursing	4,887	4,753	4,824	5,152	5,289	4,777	4,601	4,533	4,834
Pharmaceutical sciences	826	793	851	722	694	774	727	664	676
Preventive medicine/community health	2,633	2,706	2,585	2,680	2,853	2,780	2,733	2,765	2,667
Speech pathology/audiology	1,297	1,209	1,269	1,216	1,447	1,274	1,205	1,244	1,353
Veterinary sciences	71	65	65	76	86	82	85	89	83
Clinical medicine, n.e.c.	551	573	556	494	536	539	596	621	591
Health related, n.e.c.	2,839	2,601	2,643	2,871	2,706	3,317	3,230	3,858	3,746

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-23. Science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1981-89

Field, citizenship, and racial/ethnic background	1981 1/	1982 1/	1983	1984 2/	1985 2/	1986 2/	1987 2/	1988	1989
Total, all surveyed fields:	378,104	385,056	394,048	398,178	407,942	419,338	425,358	429,831	440,983
Total U.S. citizens	-	-	320,404	322,742	327,763	331,725	332,877	332,040	339,168
Black, non-Hispanic	10,104	12,088	12,985	12,774	12,608	12,609	12,577	13,561	14,149
American Indian/Alaskan Native	643	1,081	1,106	987	880	903	958	1,117	1,079
Asian/Pacific Islander	7,345	9,123	10,352	11,173	13,035	13,956	15,777	16,574	17,518
Hispanic	6,645	8,699	10,374	10,113	10,206	10,255	10,576	11,050	11,505
White, non-Hispanic	210,341	250,998	261,460	260,860	261,525	266,696	268,513	270,472	274,365
Other or unknown	-	-	24,127	26,835	29,509	27,306	24,476	19,266	20,552
Foreign	-	-	73,644	75,436	80,179	87,613	92,481	97,791	101,815
Sciences, total:	253,580	256,197	257,646	258,416	263,776	267,512	270,955	274,513	281,685
Total U.S. citizens	-	-	214,699	213,920	215,700	215,393	215,387	215,838	220,454
Black, non-Hispanic	7,824	9,276	9,642	9,311	9,165	9,077	9,064	9,706	10,087
American Indian/Alaskan Native	414	740	735	640	617	618	665	785	739
Asian/Pacific Islander	4,365	5,420	5,978	6,358	7,222	7,697	8,764	9,305	9,982
Hispanic	5,054	6,677	7,460	7,194	7,139	7,070	7,113	7,403	7,825
White, non-Hispanic	144,644	172,745	176,928	174,306	174,056	175,299	175,874	177,941	180,480
Other or unknown	-	-	13,956	16,111	17,501	15,632	13,907	10,698	11,341
Foreign	-	-	42,947	44,496	48,076	52,119	55,568	58,675	61,231
Physical sciences:	27,382	28,199	29,466	30,064	30,995	32,260	32,738	32,972	33,584
Total U.S. citizens	-	-	21,805	22,017	22,054	22,232	22,110	21,860	21,787
Black, non-Hispanic	435	553	575	596	535	524	536	569	603
American Indian/Alaskan Native	19	50	45	77	35	48	46	52	44
Asian/Pacific Islander	623	697	748	891	937	912	1,047	1,213	1,160
Hispanic	373	496	563	535	599	629	591	624	680
White, non-Hispanic	15,856	17,689	18,657	18,595	18,338	18,565	18,098	18,292	18,327
Other or unknown	-	-	1,217	1,323	1,610	1,554	1,792	1,110	973
Foreign	-	-	7,661	8,047	8,941	10,028	10,628	11,112	11,797
Earth, atmospheric, and ocean sciences:	14,422	15,174	15,544	15,612	15,545	15,163	14,522	14,032	13,812
Total U.S. citizens	-	-	13,679	13,808	13,651	13,067	12,299	11,589	11,222
Black, non-Hispanic	102	103	111	108	122	98	95	108	95
American Indian/Alaskan Native	15	22	27	23	23	21	19	29	27
Asian/Pacific Islander	126	208	239	187	193	152	181	210	208
Hispanic	154	191	226	263	241	239	228	211	209
White, non-Hispanic	9,183	11,393	12,322	12,021	11,860	11,654	11,035	10,531	10,250
Other or unknown	-	-	754	1,206	1,212	903	741	500	433
Foreign	-	-	1,865	1,804	1,894	2,096	2,223	2,443	2,590
Mathematical sciences:	15,915	17,199	17,397	17,478	17,613	17,990	18,602	19,193	19,473
Total U.S. citizens	-	-	12,442	12,285	12,262	12,179	12,471	12,763	12,848
Black, non-Hispanic	304	357	404	394	410	450	448	432	469
American Indian/Alaskan Native	7	42	32	23	22	32	48	32	34
Asian/Pacific Islander	385	492	564	565	625	707	771	759	774
Hispanic	230	290	331	292	262	270	269	335	308
White, non-Hispanic	8,054	10,158	10,293	9,976	9,818	9,547	9,714	10,217	10,222
Other or unknown	-	-	818	1,035	1,125	1,173	1,221	988	1,041
Foreign	-	-	4,955	5,193	5,351	5,811	6,131	6,430	6,625
Computer sciences:	16,437	19,812	23,616	25,810	29,844	31,425	32,137	32,787	32,914
Total U.S. citizens	-	-	18,068	19,451	22,386	23,419	23,409	23,717	23,246
Black, non-Hispanic	262	528	564	561	609	686	750	825	842
American Indian/Alaskan Native	5	31	22	48	56	20	27	40	42
Asian/Pacific Islander	638	890	1,099	1,251	1,853	2,078	2,463	2,690	2,741
Hispanic	135	249	282	292	481	445	544	517	546
White, non-Hispanic	7,254	11,574	13,482	13,983	15,569	16,498	17,149	17,660	16,745
Other or unknown	-	-	2,619	3,316	3,818	3,692	2,476	1,985	2,330
Foreign	-	-	5,548	6,359	7,458	8,006	8,728	9,070	9,668
Agricultural sciences:	12,100	12,314	12,290	12,062	11,380	11,329	11,004	11,000	11,039
Total U.S. citizens	-	-	9,598	9,426	8,784	8,590	8,134	8,131	8,226
Black, non-Hispanic	126	145	133	135	147	126	132	143	151
American Indian/Alaskan Native	13	25	32	25	20	24	28	31	24
Asian/Pacific Islander	122	138	133	140	136	129	160	210	250
Hispanic	168	210	223	250	320	299	216	272	293
White, non-Hispanic	7,709	8,504	8,667	8,612	7,747	7,702	7,368	7,246	7,226
Other or unknown	-	-	410	264	414	310	230	229	282
Foreign	-	-	2,692	2,636	2,596	2,739	2,870	2,869	2,813

See footnotes at end of table.

Table B-23. Science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1981-89 -Continued

Field, citizenship, and racial/ethnic background	1981 1/	1982 1/	1983	1984 2/	1985 2/	1986 2/	1987 2/	1988	1989
Biological sciences:	46,979	46,310	46,055	46,171	46,538	47,216	47,401	48,273	49,662
Total U.S. citizens	-	-	39,969	39,782	39,582	39,328	38,608	38,463	38,829
Black, non-Hispanic	919	1,128	1,163	1,160	1,185	1,112	1,059	1,158	1,224
American Indian/Alaskan Native	40	92	121	83	89	106	93	110	90
Asian/Pacific Islander	962	1,131	1,276	1,320	1,466	1,587	1,694	1,839	2,089
Hispanic	586	810	915	853	943	966	1,047	1,138	1,226
White, non-Hispanic	31,364	34,843	34,998	35,113	34,304	34,065	33,089	33,150	32,897
Other or unknown	-	-	1,496	1,253	1,595	1,492	1,626	1,068	1,303
Foreign	-	-	6,086	6,389	6,956	7,888	8,793	9,810	10,833
Psychology:	40,691	40,098	41,039	41,074	41,308	41,551	42,785	44,277	46,248
Total U.S. citizens	-	-	39,605	39,685	39,811	40,047	41,244	42,616	44,606
Black, non-Hispanic	1,450	1,643	1,911	1,933	1,815	1,815	1,802	1,960	2,056
American Indian/Alaskan Native	93	139	136	116	136	135	154	179	182
Asian/Pacific Islander	406	441	532	545	559	619	728	752	821
Hispanic	1,231	1,471	1,814	1,903	1,613	1,709	1,669	1,727	1,775
White, non-Hispanic	23,497	30,321	32,665	32,143	32,741	33,285	34,792	36,034	37,783
Other or unknown	-	-	2,547	3,045	2,947	2,484	2,099	1,964	1,989
Foreign	-	-	1,434	1,389	1,497	1,504	1,541	1,661	1,642
Social sciences:	79,654	77,091	72,239	70,145	70,553	70,578	71,766	71,979	74,953
Total U.S. citizens	-	-	59,533	57,466	57,170	56,531	57,112	56,699	59,690
Black, non-Hispanic	4,226	4,819	4,781	4,424	4,342	4,266	4,242	4,511	4,647
American Indian/Alaskan Native	222	339	320	245	236	232	250	312	296
Asian/Pacific Islander	1,103	1,423	1,387	1,459	1,453	1,513	1,720	1,632	1,939
Hispanic	2,177	2,960	3,106	2,806	2,680	2,513	2,549	2,579	2,788
White, non-Hispanic	41,727	48,263	45,844	43,863	43,679	43,983	44,629	44,811	47,030
Other or unknown	-	-	4,095	4,669	4,780	4,024	3,722	2,854	2,990
Foreign	-	-	12,706	12,679	13,383	14,047	14,654	15,280	15,263
Engineering, total:	80,479	84,594	91,952	93,659	96,968	103,093	104,717	103,816	104,922
Total U.S. citizens	-	-	64,333	65,649	68,028	70,947	71,180	68,388	68,257
Black, non-Hispanic	880	1,144	1,411	1,475	1,422	1,511	1,443	1,542	1,657
American Indian/Alaskan Native	109	171	181	192	122	132	124	144	124
Asian/Pacific Islander	2,234	2,747	3,419	3,834	4,827	5,186	5,885	5,967	6,075
Hispanic	941	1,101	1,471	1,526	1,500	1,645	1,738	1,742	1,734
White, non-Hispanic	37,269	43,376	49,108	49,836	50,844	53,416	54,198	52,843	51,959
Other or unknown	-	-	8,743	8,786	9,313	9,057	7,792	6,150	6,708
Foreign	-	-	27,619	28,010	28,940	32,146	33,537	35,428	36,665
Chemical engineering:	6,496	7,189	7,563	7,373	7,150	7,012	7,111	6,618	6,411
Total U.S. citizens	-	-	5,048	5,013	4,729	4,640	4,634	4,082	3,643
Black, non-Hispanic	54	85	88	73	71	85	87	84	79
American Indian/Alaskan Native	13	14	11	9	8	5	26	24	10
Asian/Pacific Islander	192	312	311	334	277	287	357	313	248
Hispanic	76	101	89	141	107	116	117	135	111
White, non-Hispanic	2,809	3,850	4,256	4,110	3,865	3,886	3,827	3,382	3,065
Other or unknown	-	-	293	346	401	261	220	144	130
Foreign	-	-	2,515	2,360	2,421	2,372	2,477	2,536	2,768
Civil engineering:	14,515	14,523	15,314	15,584	15,265	15,379	14,957	15,077	15,073
Total U.S. citizens	-	-	9,979	10,191	9,816	9,572	9,276	9,178	9,195
Black, non-Hispanic	151	139	188	198	196	186	173	201	252
American Indian/Alaskan Native	8	22	23	19	16	29	9	22	22
Asian/Pacific Islander	425	410	457	443	452	480	606	617	636
Hispanic	219	221	298	310	271	285	273	288	292
White, non-Hispanic	6,761	7,103	7,799	7,853	7,578	7,455	7,196	7,495	7,498
Other or unknown	-	-	1,214	1,368	1,303	1,137	1,019	555	495
Foreign	-	-	5,335	5,393	5,449	5,807	5,681	5,899	5,878
Electrical engineering:	20,193	22,017	25,213	26,306	28,128	30,008	31,339	31,960	33,306
Total U.S. citizens	-	-	17,631	18,763	19,722	20,480	21,248	21,636	22,298
Black, non-Hispanic	224	303	367	415	456	410	418	509	559
American Indian/Alaskan Native	34	59	48	46	30	43	18	39	37
Asian/Pacific Islander	633	794	1,171	1,480	1,966	2,084	2,440	2,584	2,658
Hispanic	259	317	394	423	443	473	519	524	553
White, non-Hispanic	8,710	10,597	12,199	12,694	13,572	13,896	14,783	15,267	15,685
Other or unknown	-	-	3,452	3,705	3,255	3,574	3,070	2,713	2,806
Foreign	-	-	7,582	7,543	8,406	9,528	10,091	10,324	11,008

See footnotes at end of table.

Table B-23. Science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1981-89 -Continued

Field, citizenship, and racial/ethnic background	1981 1/	1982 1/	1983	1984 2/	1985 2/	1986 2/	1987 2/	1988	1989
Industrial engineering:	10,026	9,870	9,621	9,820	11,104	12,160	12,750	11,940	11,750
Total U.S. citizens	-	-	7,882	7,956	9,091	9,927	10,061	9,190	8,772
Black, non-Hispanic	161	250	321	322	257	300	292	300	292
American Indian/Alaskan Native	16	19	17	27	11	10	25	15	17
Asian/Pacific Islander	200	288	218	235	337	410	453	477	478
Hispanic	135	175	224	291	256	278	283	280	253
White, non-Hispanic	5,268	5,948	6,349	6,198	7,292	7,715	8,314	7,560	7,043
Other or unknown	-	-	753	883	938	1,214	694	558	689
Foreign	-	-	1,739	1,864	2,013	2,233	2,689	2,750	2,978
Mechanical engineering:	10,618	11,467	12,911	13,855	14,157	15,740	16,304	16,233	16,184
Total U.S. citizens	-	-	8,313	9,008	9,370	10,352	10,816	10,196	10,428
Black, non-Hispanic	71	100	135	170	161	161	187	200	200
American Indian/Alaskan Native	4	14	19	30	25	15	23	12	13
Asian/Pacific Islander	240	336	425	494	794	811	883	777	844
Hispanic	100	113	125	125	181	243	282	217	214
White, non-Hispanic	4,085	5,333	6,788	7,167	7,159	7,887	7,945	7,898	7,565
Other or unknown	-	-	821	1,022	1,050	1,235	1,496	1,092	1,592
Foreign	-	-	4,598	4,847	4,787	5,388	5,488	6,037	5,756
Other engineering:	18,631	19,528	21,330	20,721	21,164	22,794	22,256	21,988	22,198
Total U.S. citizens	-	-	15,480	14,718	15,300	15,976	15,145	14,106	13,921
Black, non-Hispanic	219	267	312	297	281	369	286	248	275
American Indian/Alaskan Native	34	43	63	61	32	30	23	32	25
Asian/Pacific Islander	544	607	837	848	1,001	1,114	1,146	1,199	1,211
Hispanic	152	174	341	236	242	250	264	298	311
White, non-Hispanic	9,636	10,545	11,717	11,814	11,378	12,577	12,133	11,241	11,103
Other or unknown	-	-	2,210	1,462	2,366	1,636	1,293	1,088	996
Foreign	-	-	5,850	6,003	5,864	6,818	7,111	7,882	8,277
Health fields:	44,045	44,265	44,450	46,103	47,198	48,733	49,686	51,502	54,376
Total U.S. citizens	-	-	41,372	43,173	44,035	45,385	46,310	47,814	50,457
Black, non-Hispanic	1,400	1,668	1,932	1,988	2,021	2,021	2,070	2,313	2,405
American Indian/Alaskan Native	120	170	190	155	141	153	169	188	216
Asian/Pacific Islander	746	956	955	981	986	1,073	1,128	1,302	1,461
Hispanic	650	921	1,443	1,393	1,567	1,540	1,725	1,905	1,946
White, non-Hispanic	28,428	34,877	35,424	36,718	36,625	37,981	38,441	39,688	41,926
Other or unknown	-	-	1,428	1,938	2,695	2,617	2,777	2,418	2,503
Foreign	-	-	3,078	2,930	3,163	3,348	3,376	3,688	3,919

1/ For part-time students, distribution by citizenship was first requested in 1982 and did not become a standard question until 1983.

2/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

SOURCE: National Science Foundation, SRS

Table B-24. Full-time science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	243,671	246,218	253,735	255,597	259,467	268,404	273,434	278,167	286,619
Total, science/engineering fields	219,088	222,844	230,621	232,230	235,615	244,526	248,730	252,749	259,575
Engineering, total	46,257	50,239	54,327	55,539	56,293	60,726	62,229	63,478	64,580
Aerospace	1,483	1,522	1,840	1,854	1,994	2,154	2,372	2,533	2,718
Agricultural	672	739	766	773	767	881	924	879	851
Biomedical	867	931	1,031	1,121	1,129	1,294	1,392	1,455	1,611
Chemical	4,989	5,608	5,869	5,734	5,546	5,594	5,674	5,359	5,265
Civil	9,208	9,768	10,191	10,466	10,102	10,370	9,884	10,198	10,168
Electrical	10,450	11,533	13,203	13,857	14,752	16,322	17,040	17,653	18,359
Engineering science	1,220	1,277	1,356	1,272	1,264	1,445	1,386	1,434	1,274
Industrial	3,642	3,831	3,334	3,438	3,530	3,889	4,261	4,406	4,773
Mechanical	6,422	7,267	8,330	8,698	8,875	9,801	10,175	10,438	10,394
Metallurgical/materials	2,454	2,478	2,704	2,872	3,088	3,347	3,397	3,421	3,687
Mining	389	373	428	424	391	442	435	415	355
Nuclear	1,032	1,042	1,052	1,018	1,030	1,059	1,044	1,105	1,112
Petroleum	393	476	620	614	577	572	644	599	506
Engineering, n.e.c.	3,036	3,394	3,603	3,398	3,248	3,556	3,601	3,583	3,507
Sciences, total	172,831	172,605	176,294	176,691	179,322	183,800	186,501	189,271	194,995
Physical sciences	23,308	24,040	25,205	25,852	26,669	27,764	28,414	28,574	29,164
Astronomy	565	590	585	596	635	654	681	705	762
Chemistry	13,719	14,287	15,023	15,123	15,580	15,997	16,235	16,088	16,261
Physics	8,937	9,072	9,495	9,964	10,287	10,957	11,304	11,638	12,007
Physical sciences, n.e.c.	87	91	102	169	167	156	194	143	134
Earth, atmospheric, and ocean sciences	11,038	11,436	12,049	11,819	11,439	11,323	10,543	10,296	10,088
Atmospheric sciences	745	779	785	776	872	855	824	829	810
Geosciences	7,029	7,521	8,203	8,093	7,703	7,384	6,666	6,314	5,939
Oceanography	1,622	1,593	1,612	1,599	1,562	1,694	1,651	1,629	1,790
Earth, atm. & oc. sci., n.e.c.	1,642	1,543	1,449	1,351	1,302	1,390	1,402	1,524	1,549
Mathematical sciences	10,154	10,823	10,964	11,319	11,833	12,398	13,068	13,554	13,792
Computer sciences	7,445	9,171	10,687	11,587	14,101	15,310	15,572	15,596	16,026
Agricultural sciences	10,076	9,891	9,836	9,750	9,097	9,229	8,983	8,986	8,945
Biological sciences	37,582	36,989	37,112	37,480	37,362	38,178	38,776	39,764	41,012
Anatomy	963	937	921	936	891	893	940	985	1,030
Biochemistry	3,768	3,850	4,007	4,263	4,488	4,664	4,639	4,768	4,912
Biology	9,479	9,044	9,010	8,971	8,531	8,577	8,685	8,883	9,359
Biometry/epidemiology	999	919	877	751	996	1,055	1,124	1,176	1,178
Biophysics	457	423	437	419	381	449	468	544	610
Botany	3,056	3,169	3,043	2,993	2,836	2,883	2,712	2,685	2,585
Cell biology	989	1,110	1,138	1,209	1,406	1,655	1,900	2,028	2,153
Ecology	939	910	844	877	876	857	796	836	879
Entomology/parasitology	1,452	1,340	1,305	1,264	1,138	1,107	1,062	1,061	1,009
Genetics	873	924	964	986	1,057	1,171	1,208	1,187	1,283
Microbiology	3,508	3,517	3,704	3,826	3,879	3,871	4,054	4,345	4,358
Nutrition	3,188	3,120	2,988	3,018	3,040	3,055	3,014	2,883	2,881
Pathology	1,053	1,021	1,068	1,083	1,036	1,070	1,135	1,126	1,169
Pharmacology	1,914	1,940	2,004	1,998	2,064	2,036	2,004	2,070	2,214
Physiology	1,924	1,805	1,766	1,969	1,986	2,005	1,996	2,008	2,057
Zoology	2,248	2,136	2,052	1,863	1,718	1,720	1,787	1,719	1,774
Biosciences, n.e.c.	772	824	984	1,054	1,039	1,110	1,252	1,460	1,561
Psychology	26,725	25,818	26,701	26,108	25,769	26,521	27,426	28,412	30,221
Social sciences	46,503	44,437	43,740	42,776	43,052	43,077	43,719	44,089	45,747
Agricultural economics	2,038	1,978	2,047	2,027	1,990	1,964	1,857	1,909	1,912
Anthropology	4,323	4,105	3,940	3,968	3,906	4,051	4,098	4,266	4,412
Economics (except agricultural)	9,387	9,479	9,215	8,824	8,975	9,017	9,047	9,094	9,195
Geography	2,233	2,139	2,202	2,175	2,124	2,108	2,290	2,215	2,351
History and philosophy of science	217	223	229	243	227	237	267	266	283
Linguistics	2,265	2,157	2,375	2,319	2,337	2,358	2,449	2,520	2,468
Political science	14,171	13,713	13,462	12,816	13,194	13,453	13,049	13,376	14,155
Sociology	5,401	4,875	4,794	4,745	4,644	4,595	5,026	5,084	5,271
Sociology/anthropology	575	657	671	606	565	584	560	566	633
Social sciences, n.e.c.	5,893	5,111	4,805	5,053	5,090	4,710	5,076	4,793	5,067
Total, health fields	24,583	23,374	23,114	23,367	23,852	23,878	24,704	25,418	27,044
Dentistry	761	727	701	768	745	825	909	930	1,008
Neurology	189	202	258	313	335	373	475	595	668
Nursing	7,137	6,612	6,204	6,113	6,045	5,878	5,924	6,024	5,987
Pharmaceutical sciences	1,688	1,703	1,697	1,699	1,718	1,763	1,747	1,829	2,015
Preventive medicine/community health	4,473	4,056	3,961	3,955	4,137	4,079	4,162	4,217	4,206
Speech pathology/audiology	5,394	5,444	5,385	5,412	5,596	5,502	5,195	5,391	5,849
Veterinary sciences	372	378	363	425	515	506	592	606	668
Clinical medicine, n.e.c.	1,014	1,083	1,090	1,038	1,165	1,157	1,226	1,301	1,433
Health related, n.e.c.	3,555	3,169	3,455	3,644	3,596	3,795	4,474	4,525	5,210

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-25. Full-time science/engineering graduate students in all institutions by geographic distribution: 1981-89

Division and State	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all institutions	243,671	246,218	253,735	255,597	259,467	268,404	273,434	278,167	286,619
New England	19,127	19,175	19,589	19,319	19,810	20,664	20,666	21,787	21,900
Connecticut	3,514	3,653	3,726	3,429	3,651	3,667	3,811	3,990	4,086
Maine	313	361	412	462	405	421	445	504	505
Massachusetts	12,958	12,683	12,873	12,828	13,201	13,896	13,611	14,493	14,380
New Hampshire	613	674	667	693	698	743	763	829	800
Rhode Island	1,325	1,384	1,445	1,478	1,434	1,524	1,625	1,501	1,622
Vermont	404	420	466	429	421	413	411	470	507
Middle Atlantic	36,521	36,860	37,422	37,137	37,617	39,444	40,163	42,413	43,790
New Jersey	4,251	4,175	4,114	4,587	4,798	5,161	5,622	5,601	5,807
New York	21,842	22,097	22,275	21,993	22,094	23,409	23,520	24,875	25,173
Pennsylvania	10,428	10,588	11,033	10,557	10,725	10,874	11,021	11,937	12,810
East North Central	45,411	45,833	47,422	45,398	46,469	48,228	50,453	53,282	54,780
Illinois	12,334	12,573	13,327	12,925	13,385	14,224	14,900	15,753	15,985
Indiana	5,830	5,903	6,002	5,948	5,881	6,146	6,500	6,890	7,370
Michigan	9,054	8,981	9,274	9,356	9,440	9,834	9,985	10,098	10,708
Ohio	11,754	11,791	12,358	11,117	11,803	12,030	12,955	13,882	13,831
Wisconsin	6,439	6,585	6,461	6,052	5,960	5,994	6,113	6,659	6,886
West North Central	17,910	18,211	18,928	17,683	17,231	17,624	17,721	19,164	19,638
Iowa	3,356	3,606	3,851	3,658	3,777	3,853	3,860	4,108	4,187
Kansas	3,586	3,604	3,783	3,126	2,405	2,445	2,464	2,711	2,907
Minnesota	4,501	4,487	4,571	4,433	4,600	4,661	4,560	5,474	5,556
Missouri	3,732	3,805	3,889	3,677	3,690	3,920	4,007	4,007	4,132
Nebraska	1,465	1,440	1,472	1,472	1,409	1,347	1,460	1,475	1,456
North Dakota	757	770	779	726	768	811	787	803	785
South Dakota	513	499	583	591	582	587	583	586	615
South Atlantic	32,334	32,740	33,018	33,022	33,911	35,558	36,050	38,543	40,543
Delaware	726	734	776	699	762	800	857	844	880
District of Columbia	3,614	3,321	3,050	3,088	3,468	3,484	3,505	3,731	3,416
Florida	5,989	6,150	5,935	6,028	6,368	6,455	6,309	7,000	7,849
Georgia	4,435	4,537	4,580	4,805	4,489	4,786	4,904	5,196	5,330
Maryland	3,896	3,854	4,084	3,889	4,003	4,329	4,391	4,856	5,242
North Carolina	5,685	6,113	6,259	6,130	6,091	6,513	6,573	7,196	7,572
South Carolina	1,869	1,884	2,111	2,062	2,125	2,307	2,301	2,281	2,497
Virginia	4,874	4,854	4,955	5,118	5,451	5,749	6,219	6,415	6,653
West Virginia	1,246	1,293	1,268	1,203	1,154	1,135	991	1,024	1,104
East South Central	9,406	9,361	9,856	9,810	9,877	10,284	10,507	11,582	12,218
Alabama	2,441	2,452	2,573	2,704	2,942	3,213	3,367	3,625	3,908
Kentucky	2,100	2,103	2,244	2,000	1,918	1,894	1,955	2,424	2,489
Mississippi	1,467	1,550	1,740	1,800	1,716	1,890	1,871	1,955	2,005
Tennessee	3,398	3,256	3,299	3,306	3,301	3,287	3,314	3,578	3,816
West South Central	20,868	22,356	23,946	23,624	23,273	23,844	23,705	24,283	25,599
Arkansas	1,046	1,111	1,088	825	783	786	715	902	1,142
Louisiana	2,961	3,177	3,321	3,605	3,643	3,594	3,657	3,715	3,736
Oklahoma	2,561	2,738	2,938	2,935	2,566	2,650	2,541	2,374	2,335
Texas	14,300	15,330	16,599	16,259	16,281	16,814	16,792	17,292	18,386
Mountain	15,657	16,460	17,092	16,489	16,730	17,405	18,041	18,164	18,164
Arizona	3,646	3,932	4,280	4,328	4,568	4,884	4,866	5,280	5,173
Colorado	5,055	5,060	5,003	4,800	5,001	5,257	5,696	5,460	5,343
Idaho	621	655	653	599	561	583	661	657	719
Montana	794	952	1,014	995	916	859	832	899	894
Nevada	442	448	557	432	428	425	509	519	683
New Mexico	1,753	1,801	1,913	1,790	1,874	1,939	2,099	1,990	1,863
Utah	2,681	2,911	2,878	2,889	2,860	2,984	2,820	2,820	2,859
Wyoming	665	701	794	656	522	474	558	539	630
Pacific	45,156	43,852	44,951	41,979	43,224	43,954	44,831	47,416	48,379
Alaska	280	321	374	345	212	302	223	267	390
California	35,746	34,701	35,671	33,204	34,363	34,829	35,933	37,780	38,633
Hawaii	1,544	1,548	1,502	1,460	1,467	1,570	1,527	1,522	1,539
Oregon	2,618	2,596	2,702	2,633	2,705	2,864	2,830	2,934	2,898
Washington	4,968	4,686	4,702	4,337	4,477	4,389	4,318	4,913	4,919
Outlying Areas	1,281	1,370	1,511	1,706	1,777	1,733	1,513	1,533	1,608
State, Unknown 2/	0	0	0	9,430	9,548	9,666	9,784	0	0

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

2/ These numbers represent the total of all nonsampled master's-granting institutions.

SOURCE: National Science Foundation, SRS

Table B-26. Male full-time science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	162,404	164,071	169,148	170,014	172,179	177,906	180,785	181,332	184,689
Total, science/engineering fields	154,763	156,973	162,253	163,118	165,170	170,937	173,114	173,719	176,472
Engineering, total	41,471	44,827	48,570	49,350	49,874	53,581	54,862	55,744	56,369
Aerospace	1,432	1,449	1,760	1,768	1,868	2,006	2,205	2,365	2,538
Agricultural	629	689	708	706	709	820	839	807	782
Biomedical	717	751	804	874	884	996	1,046	1,080	1,221
Chemical	4,456	4,936	5,100	5,002	4,792	4,806	4,800	4,567	4,469
Civil	7,922	8,370	8,751	8,885	8,477	8,724	8,411	8,551	8,464
Electrical	9,739	10,715	12,248	12,711	13,553	14,851	15,498	15,979	16,562
Engineering science	1,114	1,154	1,221	1,127	1,146	1,293	1,257	1,303	1,135
Industrial	2,946	3,059	2,714	2,806	2,879	3,138	3,500	3,642	3,850
Mechanical	6,075	6,834	7,847	8,137	8,316	9,173	9,450	9,602	9,543
Metallurgical/materials	2,167	2,170	2,380	2,518	2,652	2,836	2,845	2,858	3,059
Mining	352	338	387	383	363	407	400	373	311
Nuclear	960	969	978	948	939	960	940	1,004	993
Petroleum	359	443	557	562	530	534	601	568	486
Engineering, n.e.c.	2,603	2,950	3,115	2,923	2,766	3,037	3,070	3,045	2,956
Sciences, total	113,292	112,146	113,683	113,768	115,296	117,356	118,252	117,975	120,103
Physical sciences	19,307	19,641	20,371	20,755	21,241	22,023	22,384	22,208	22,505
Astronomy	482	496	500	501	531	538	566	569	626
Chemistry	10,708	10,937	11,344	11,299	11,592	11,796	11,849	11,433	11,408
Physics	8,059	8,144	8,458	8,857	9,002	9,594	9,861	10,119	10,393
Physical sciences, n.e.c.	58	64	69	98	116	95	108	87	78
Earth, atmospheric, and ocean sciences	8,429	8,608	9,038	8,929	8,574	8,390	7,826	7,506	7,304
Atmospheric sciences	637	663	667	655	733	694	676	682	648
Geosciences	5,394	5,733	6,249	6,168	5,842	5,610	5,074	4,781	4,506
Oceanography	1,199	1,149	1,162	1,150	1,114	1,169	1,159	1,104	1,216
Earth, atm. & oc. sci., n.e.c.	1,199	1,063	960	956	885	917	917	939	934
Mathematical sciences	7,613	8,029	8,044	8,332	8,615	8,998	9,500	9,821	9,824
Computer sciences	5,718	6,860	8,038	8,825	11,051	11,975	12,245	12,197	12,693
Agricultural sciences	7,735	7,431	7,348	7,216	6,734	6,853	6,631	6,539	6,438
Biological sciences	23,390	22,340	22,211	22,253	22,029	22,226	22,428	22,770	23,160
Anatomy	617	580	558	555	509	514	538	554	579
Biochemistry	2,515	2,476	2,535	2,675	2,826	2,867	2,824	2,861	2,955
Biology	6,039	5,520	5,418	5,382	5,077	5,054	5,155	5,191	5,375
Biometry/epidemiology	572	453	424	353	458	486	536	550	540
Biophysics	334	316	328	314	287	337	355	406	464
Botany	2,011	2,027	1,951	1,900	1,796	1,854	1,673	1,666	1,587
Cell biology	634	704	748	756	895	1,009	1,163	1,201	1,243
Ecology	636	597	557	586	561	544	502	523	536
Entomology/parasitology	1,144	1,021	969	942	853	808	776	752	693
Genetics	451	441	487	517	567	618	620	610	639
Microbiology	2,030	2,011	2,124	2,175	2,224	2,186	2,263	2,416	2,360
Nutrition	1,210	1,153	1,060	1,072	1,119	1,107	1,089	993	992
Pathology	685	642	668	670	634	644	681	689	716
Pharmacology	1,268	1,266	1,290	1,249	1,277	1,242	1,182	1,232	1,265
Physiology	1,298	1,202	1,152	1,271	1,245	1,247	1,253	1,246	1,234
Zoology	1,487	1,438	1,370	1,213	1,112	1,088	1,116	1,044	1,090
Biosciences, n.e.c.	459	493	572	623	589	621	702	836	892
Psychology	12,066	11,282	11,405	10,756	10,356	10,332	10,466	10,291	10,736
Social sciences	29,034	27,955	27,228	26,702	26,696	26,559	26,772	26,643	27,443
Agricultural economics	1,600	1,581	1,621	1,610	1,554	1,537	1,429	1,449	1,419
Anthropology	1,986	1,903	1,728	1,803	1,786	1,792	1,828	1,854	1,884
Economics (except agricultural)	7,317	7,229	7,072	6,807	6,903	6,924	6,909	6,872	6,831
Geography	1,540	1,502	1,491	1,496	1,433	1,452	1,546	1,485	1,556
History and philosophy of science	142	149	145	166	155	150	184	169	178
Linguistics	1,007	946	1,025	972	981	1,016	1,033	1,061	1,076
Political science	9,450	9,127	8,818	8,554	8,579	8,655	8,500	8,468	8,852
Sociology	2,702	2,331	2,330	2,278	2,268	2,141	2,350	2,388	2,505
Sociology/anthropology	280	328	317	305	271	274	278	269	297
Social sciences, n.e.c.	3,010	2,859	2,681	2,711	2,766	2,618	2,715	2,628	2,845
Total, health fields	7,641	7,098	6,895	6,896	7,009	6,969	7,671	7,613	8,217
Dentistry	611	588	552	609	584	643	671	685	720
Neurology	130	138	186	205	206	232	296	358	398
Nursing	358	374	358	357	310	328	522	357	445
Pharmaceutical sciences	1,181	1,192	1,163	1,130	1,146	1,136	1,089	1,110	1,215
Preventive medicine/community health	2,130	1,841	1,791	1,674	1,737	1,818	1,964	1,843	1,694
Speech pathology/audiology	828	819	770	739	808	650	549	607	626
Veterinary sciences	241	239	226	265	330	327	374	379	400
Clinical medicine, n.e.c.	614	649	616	564	596	593	667	726	798
Health related, n.e.c.	1,548	1,258	1,233	1,353	1,292	1,242	1,539	1,548	1,921

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

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Table B-27. Female full-time science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	81,267	82,147	84,587	85,583	87,288	90,498	92,649	96,835	101,930
Total, science/engineering fields	64,325	65,871	68,368	69,112	70,445	73,589	75,616	79,030	83,103
Engineering, total	4,786	5,412	5,757	6,189	6,419	7,145	7,367	7,734	8,211
Aerospace	51	73	80	86	126	148	167	168	180
Agricultural	43	50	58	67	58	61	85	72	69
Biomedical	150	180	227	247	245	298	346	375	390
Chemical	533	672	769	732	754	788	874	792	796
Civil	1,286	1,398	1,440	1,581	1,625	1,646	1,473	1,647	1,704
Electrical	711	818	955	1,146	1,199	1,471	1,542	1,674	1,797
Engineering science	106	123	135	145	118	152	129	131	139
Industrial	696	772	620	632	651	751	761	764	923
Mechanical	347	433	483	561	559	628	725	836	851
Metallurgical/materials	287	308	324	354	436	511	552	563	628
Mining	37	35	41	41	28	35	35	42	44
Nuclear	72	73	74	70	91	99	104	101	119
Petroleum	34	33	63	52	47	38	43	31	20
Engineering, n.e.c.	433	444	488	475	482	519	531	538	551
Sciences, total	59,539	60,459	62,611	62,923	64,026	66,444	68,249	71,296	74,892
Physical sciences	4,001	4,399	4,834	5,097	5,428	5,741	6,030	6,366	6,659
Astronomy	83	94	85	95	104	116	115	136	136
Chemistry	3,011	3,350	3,679	3,824	3,988	4,201	4,386	4,655	4,853
Physics	878	928	1,037	1,107	1,285	1,363	1,443	1,519	1,614
Physical sciences, n.e.c.	29	27	33	71	51	61	86	56	56
Earth, atmospheric, and ocean sciences	2,609	2,828	3,011	2,890	2,865	2,933	2,717	2,790	2,784
Atmospheric sciences	108	116	118	121	139	161	148	147	162
Geosciences	1,635	1,788	1,954	1,925	1,861	1,774	1,592	1,533	1,433
Oceanography	423	444	450	449	448	525	492	525	574
Earth, atm. & oc. sci., n.e.c.	443	480	489	395	417	473	485	585	615
Mathematical sciences	2,541	2,794	2,920	2,987	3,218	3,400	3,568	3,733	3,968
Computer sciences	1,727	2,311	2,649	2,762	3,050	3,335	3,327	3,399	3,333
Agricultural sciences	2,341	2,460	2,488	2,534	2,363	2,376	2,352	2,447	2,507
Biological sciences	14,192	14,649	14,901	15,227	15,333	15,952	16,348	16,994	17,852
Anatomy	346	357	363	381	382	379	402	431	451
Biochemistry	1,253	1,374	1,472	1,588	1,662	1,797	1,815	1,907	1,957
Biology	3,440	3,524	3,592	3,589	3,454	3,523	3,530	3,692	3,984
Biometry/epidemiology	427	466	453	398	538	569	588	626	638
Biophysics	123	107	109	105	94	112	113	138	146
Botany	1,045	1,142	1,092	1,093	1,040	1,029	1,039	1,019	998
Cell biology	355	406	390	453	511	646	737	827	910
Ecology	303	313	287	291	315	313	294	313	343
Entomology/parasitology	308	319	336	322	285	299	286	309	316
Genetics	422	483	477	469	490	553	588	577	644
Microbiology	1,478	1,506	1,580	1,651	1,655	1,685	1,791	1,929	1,998
Nutrition	1,978	1,967	1,928	1,946	1,921	1,948	1,925	1,890	1,889
Pathology	368	379	400	413	402	426	454	437	453
Pharmacology	646	674	714	749	787	794	822	838	949
Physiology	626	603	614	698	741	758	743	762	823
Zoology	761	698	682	650	606	632	671	675	684
Biosciences, n.e.c.	313	331	412	431	450	489	550	624	669
Psychology	14,659	14,536	15,296	15,352	15,413	16,189	16,960	18,121	19,485
Social sciences	17,469	16,482	16,512	16,074	16,356	16,518	16,947	17,446	18,304
Agricultural economics	438	397	426	417	436	427	428	460	493
Anthropology	2,337	2,202	2,212	2,165	2,120	2,259	2,270	2,412	2,528
Economics (except agricultural)	2,070	2,250	2,143	2,017	2,072	2,093	2,138	2,222	2,364
Geography	693	637	711	679	691	656	744	730	795
History and philosophy of science	75	74	84	77	72	87	83	97	105
Linguistics	1,258	1,211	1,350	1,347	1,356	1,342	1,416	1,459	1,392
Political science	4,721	4,586	4,644	4,262	4,615	4,798	4,549	4,908	5,303
Sociology	2,699	2,544	2,464	2,467	2,376	2,454	2,676	2,696	2,766
Sociology/anthropology	295	329	354	301	294	310	282	297	336
Social sciences, n.e.c.	2,883	2,252	2,124	2,342	2,324	2,092	2,361	2,165	2,222
Total, health fields	16,942	16,276	16,219	16,471	16,843	16,909	17,033	17,805	18,827
Dentistry	150	139	149	159	161	182	238	245	288
Neurology	59	64	72	108	129	141	179	237	270
Nursing	6,779	6,238	5,846	5,756	5,735	5,550	5,402	5,667	5,542
Pharmaceutical sciences	507	511	534	569	572	627	658	719	800
Preventive medicine/community health	2,343	2,215	2,170	2,281	2,400	2,261	2,198	2,374	2,512
Speech pathology/audiology	4,566	4,625	4,615	4,673	4,788	4,852	4,646	4,784	5,223
Veterinary sciences	131	139	137	160	185	179	218	227	268
Clinical medicine, n.e.c.	400	434	474	474	569	564	559	575	635
Health related, n.e.c.	2,007	1,911	2,222	2,291	2,304	2,553	2,935	2,977	3,289

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-28. Full-time science/engineering graduate students in public institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	173,270	175,370	181,957	184,286	184,977	191,946	195,906	199,194	205,742
Total, science/engineering fields	155.454	158,093	164,720	166,641	167,072	173,950	177,089	179,879	184,824
Engineering, total	31,872	34,885	37,813	38,659	39,259	42,879	44,629	45,771	46,665
Aerospace	1,053	1,091	1,346	1,341	1,471	1,635	1,807	1,932	2,071
Agricultural	628	686	713	719	714	830	876	834	801
Biomedical	507	548	580	639	657	801	910	934	1,001
Chemical	3,389	3,835	3,965	3,909	3,781	3,904	3,948	3,727	3,689
Civil	6,578	7,107	7,581	7,777	7,502	7,693	7,673	7,995	7,866
Electrical	6,898	7,516	8,567	8,975	9,604	11,012	11,636	12,172	12,692
Engineering science	685	732	779	646	605	671	639	633	535
Industrial	2,745	2,925	2,512	2,639	2,800	3,053	3,197	3,328	3,681
Mechanical	4,428	5,098	5,851	6,149	6,390	7,057	7,490	7,670	7,627
Metallurgical/materials	1,520	1,548	1,674	1,796	1,921	2,126	2,197	2,164	2,426
Mining	310	309	367	361	331	377	369	351	300
Nuclear	809	815	822	796	820	853	841	900	906
Petroleum	234	285	435	450	430	454	516	472	418
Engineering, n.e.c.	2,088	2,390	2,621	2,462	2,233	2,413	2,530	2,659	2,652
Sciences, total	123,582	123,208	126,907	127,982	127,813	131,071	132,460	134,108	138,159
Physical sciences	16,635	17,326	18,198	18,567	18,995	20,091	20,494	20,621	21,047
Astronomy	362	382	388	394	410	438	455	470	494
Chemistry	10,130	10,594	11,131	11,142	11,342	11,765	11,895	11,812	11,954
Physics	6,069	6,259	6,577	6,862	7,099	7,754	7,993	8,218	8,466
Physical sciences, n.e.c.	74	91	102	169	144	134	151	121	133
Earth, atmospheric, and ocean sciences	9,163	9,462	9,992	9,836	9,434	9,334	8,737	8,488	8,317
Atmospheric sciences	664	688	743	750	819	820	806	815	799
Geosciences	5,682	6,096	6,674	6 536	6,191	5,915	5,328	5,020	4,744
Oceanography	1,400	1,337	1,348	1,345	1,257	1,369	1,395	1,408	1,496
Earth, atm. & oc. sci., n.e.c.	1,417	1,341	1,227	1,205	1,167	1,230	1,208	1,245	1,278
Mathematical sciences	7,404	8,019	8,169	8,536	8,915	9,476	10,125	10,495	10,795
Computer sciences	5,343	6,462	7,697	8,366	9,800	10,510	10,531	10,661	10,841
Agricultural sciences	9,745	9,575	9,505	9,441	8,792	8,918	8,693	8,677	8,632
Biological sciences	28,452	27,557	27,743	28,088	27,716	28,312	28,524	29,162	30,032
Anatomy	630	590	621	616	585	580	607	658	710
Biochemistry	2,523	2,568	2,701	2,892	3,088	3,214	3,157	3,269	3,303
Biology	6,828	5,286	6,489	6,429	6,149	6,182	6,262	6,316	6,733
Biometry/epidemiology	580	485	468	494	527	578	578	631	668
Biophysics	267	233	233	209	204	220	238	297	339
Botany	2,808	2,915	2,806	2,789	2,634	2,666	2,488	2,447	2,352
Cell biology	579	619	592	676	726	862	1,002	1,115	1,193
Ecology	883	862	785	816	825	804	746	780	800
Entomology/parasitology	1,394	1,291	1,257	1,210	1,087	1,057	995	1,000	944
Genetics	615	650	685	698	752	871	906	856	892
Microbiology	2,672	2,604	2,766	2,857	2,916	2,899	3,021	3,252	3,214
Nutrition	2,527	2,448	2,350	2,383	2,401	2,455	2,441	2,349	2,411
Pathology	714	685	735	733	707	745	821	804	833
Pharmacology	1,299	1,322	1,358	1,383	1,413	1,413	1,412	1,460	1,519
Physiology	1,326	1,227	1,242	1,345	1,336	1,328	1,319	1,321	1,399
Zoology	2,099	2,003	1,915	1,761	1,614	1,622	1,695	1,625	1,661
Biosciences, n.e.c.	708	769	740	797	752	816	836	982	1,061
Psychology	16,476	15,657	16,358	16,235	15,960	16,269	16,491	17,203	17,887
Social sciences	30,364	29,150	29,245	28,913	28,201	28,161	28,865	28,801	30,608
Agricultural economics	1,938	1,886	1,958	1,925	1,892	1,888	1,779	1,801	1,801
Anthropology	3,103	2,884	2,737	2,795	2,749	2,749	2,828	2,951	3,073
Economics (except agricultural)	5,912	6,199	6,003	5,731	5,769	5,740	5,749	5,726	5,829
Geography	1,990	1,941	2,009	1,991	1,931	1,945	2,134	2,047	2,185
History and philosophy of science	122	122	121	126	111	112	115	130	128
Linguistics	1,439	1,506	1,637	1,610	1,487	1,530	1,606	1,636	1,651
Political science	7,995	7,615	7,747	7,484	7,152	7,274	7,372	7,615	8,379
Sociology	3,773	3,455	3,456	3,519	3,350	3,370	3,697	3,677	3,813
Sociology/anthropology	408	443	412	411	396	419	421	436	482
Social sciences, n.e.c.	3,684	3,099	3,165	3,321	3,364	3,134	3,164	2,782	3,267
Health fields	17,816	17,277	17,237	17,645	17,905	17,996	18,817	19,315	20,918
Dentistry	550	534	500	557	514	605	704	721	803
Neurology	129	137	146	180	202	234	293	375	388
Nursing	4,886	4,830	4,619	4,575	4,512	4,547	4,729	4,855	4,865
Pharmaceutical sciences	1,472	1,460	1,453	1,449	1,454	1,481	1,455	1,510	1,694
Preventive medicine/community health	3,182	2,709	2,714	2,776	2,926	2,868	2,946	2,998	3,026
Speech pathology/audiology	4,494	4,575	4,544	4,635	4,677	4,692	4,496	4,660	5,031
Veterinary sciences	302	316	298	352	432	427	510	517	585
Clinical medicine, n.e.c.	695	742	708	713	776	776	780	842	963
Health related, n.e.c.	2,106	1,974	2,255	2,408	2,412	2,366	2,904	2,837	3,563

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-29. Full-time science/engineering graduate students in private institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	70,401	70,848	71,778	71,311	74,490	76,458	77,528	78,973	80,877
Total, science/engineering fields	63,634	64,751	65,901	65,589	68,543	70,576	71,641	72,870	74,751
Engineering, total	14,385	15,354	16,514	16,880	17,034	17,847	17,600	17,707	17,915
Aerospace	430	431	494	513	523	519	565	601	647
Agricultural	44	53	53	54	53	51	48	45	50
Biomedical	360	383	451	482	472	493	482	521	610
Chemical	1,600	1,773	1,904	1,825	1,765	1,690	1,726	1,632	1,576
Civil	2,630	2,661	2,610	2,689	2,600	2,677	2,211	2,203	2,302
Electrical	3,552	4,017	4,636	4,882	5,148	5,310	5,404	5,481	5,667
Engineering science	535	545	577	626	659	774	747	801	739
Industrial	897	906	822	799	730	836	1,064	1,078	1,092
Mechanical	1,994	2,169	2,479	2,549	2,485	2,744	2,685	2,768	2,767
Metallurgical/materials	934	930	1,030	1,076	1,167	1,221	1,200	1,257	1,261
Mining	79	64	61	63	60	65	66	64	55
Nuclear	223	227	230	222	210	206	203	205	206
Petroleum	159	191	185	164	147	118	128	127	88
Engineering, n.e.c.	948	1,004	982	936	1,015	1,143	1,071	924	855
Sciences, total	49,249	49,397	49,387	48,709	51,509	52,729	54,041	55,163	56,836
Physical sciences	6,673	6,714	7,007	7,285	7,674	7,673	7,920	7,953	8,117
Astronomy	203	208	197	202	225	216	226	235	268
Chemistry	3,589	3,693	3,892	3,981	4,238	4,232	4,340	4,276	4,307
Physics	2,868	2,813	2,918	3,102	3,188	3,203	3,311	3,420	3,541
Physical sciences, n.e.c.	13	0	0	0	23	22	43	22	1
Earth, atmospheric, and ocean sciences	1,875	1,974	2,057	1,983	2,005	1,989	[illegible]	1,808	1,771
Atmospheric sciences	81	91	42	26	53	35	[illegible]	14	11
Geosciences	1,347	1,425	1,529	1,557	1,512	1,469	[illegible]	1,294	1,195
Oceanography	222	256	264	254	305	325	256	221	294
Earth, atm. & oc. sci., n.e.c.	225	202	222	146	135	160	194	279	271
Mathematical sciences	2,750	2,804	2,795	2,783	2,918	2,922	2,943	3,059	2,997
Computer sciences	2,102	2,709	2,990	3,221	4,301	4,800	5,041	4,935	5,185
Agricultural sciences	331	316	331	309	305	311	290	309	313
Biological sciences	9,130	9,432	9,369	9,392	9,646	9,866	10,252	10,602	10,980
Anatomy	333	347	300	320	306	313	333	327	320
Biochemistry	1,245	1,282	1,306	1,371	1,400	1,450	1,482	1,499	1,609
Biology	2,651	2,758	2,521	2,542	2,382	2,395	2,423	2,567	2,626
Biometry/epidemiology	419	434	409	257	469	477	546	545	510
Biophysics	190	190	204	210	177	229	230	247	271
Botany	248	254	237	204	202	217	224	238	233
Cell biology	410	491	546	533	680	793	898	913	960
Ecology	56	48	59	61	51	53	50	56	79
Entomology/parasitology	58	49	48	54	51	50	67	61	65
Genetics	258	274	279	288	305	300	302	331	391
Microbiology	836	913	938	969	963	972	1,033	1,093	1,144
Nutrition	661	672	638	635	639	600	573	534	470
Pathology	339	336	333	350	329	325	314	322	336
Pharmacology	615	618	646	615	651	623	592	610	695
Physiology	598	578	524	624	650	677	677	687	658
Zoology	149	133	137	102	104	98	92	94	113
Biosciences, n.e.c.	64	55	244	257	287	294	416	478	500
Psychology	10,249	10,161	10,343	9,873	[illegible]	10,252	10,935	11,209	12,334
Social sciences	16,139	15,287	14,495	13,863	14,851	14,916	14,854	15,288	15,139
Agricultural economics	100	92	89	102	98	76	78	108	111
Anthropology	1,220	1,221	1,203	1,173	1,157	1,302	1,270	1,315	1,339
Economics (except agricultural)	3,475	3,280	3,212	3,093	3,206	3,277	3,298	3,368	3,366
Geography	243	198	193	184	193	163	156	168	166
History and philosophy of science	95	101	108	117	116	125	152	136	155
Linguistics	826	651	738	709	850	828	843	884	817
Political science	6,176	6,098	5,715	5,332	6,042	6,179	5,677	5,761	5,776
Sociology	1,628	1,420	1,338	1,226	1,294	1,225	1,329	1,407	1,458
Sociology/anthropology	167	214	259	195	169	165	139	130	151
Social sciences, n.e.c.	2,209	2,012	1,640	1,732	1,726	1,576	1,912	2,011	1,800
Health fields	6,767	6,097	5,877	5,722	5,947	5,882	5,887	6,103	6,126
Dentistry	211	193	201	211	231	220	205	209	205
Neurology	60	65	112	133	133	139	182	220	280
Nursing	2,251	1,782	1,585	1,538	1,533	1,331	1,195	1,169	1,122
Pharmaceutical sciences	216	243	244	250	264	282	292	319	321
Preventive medicine/community health	1,291	1,347	1,247	1,179	1,211	1,211	1,216	1,219	1,180
Speech pathology/audiology	900	869	841	777	919	810	699	731	818
Veterinary sciences	70	62	65	73	83	79	82	89	83
Clinical medicine, n.e.c.	319	341	382	325	389	381	446	459	470
Health related, n.e.c.	1,449	1,195	1,200	1,236	1,184	1,429	1,570	1,688	1,647

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-30. First-year full-time science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	80,674	80,838	82,336	80,789	81,582	83,366	81,540	81,630	86,222
Total, science/engineering fields	69,617	70,374	72,445	70,849	71,773	73,675	71,493	71,516	75,654
Engineering, total	16,877	18,383	19,269	19,164	18,444	20,599	19,527	19,373	19,918
Aerospace	563	532	614	759	722	811	920	913	982
Agricultural	226	248	266	250	238	233	245	242	202
Biomedical	268	350	366	335	359	427	417	414	449
Chemical	1,698	1,879	1,824	1,595	1,533	1,513	1,367	1,264	1,338
Civil	3,619	3,751	3,975	3,853	3,688	3,913	3,336	3,324	3,502
Electrical	4,054	4,466	4,648	5,100	4,875	5,667	5,437	5,582	5,673
Engineering science	329	374	399	372	336	441	376	346	331
Industrial	1,242	1,405	1,217	1,190	1,226	1,523	1,535	1,592	1,766
Mechanical	2,457	2,703	3,121	3,129	3,030	3,420	3,245	3,213	3,311
Metallurgical/materials	623	653	753	724	795	786	841	799	892
Mining	131	116	157	113	116	134	111	113	84
Nuclear	326	331	335	283	274	295	303	291	292
Petroleum	114	176	207	152	132	146	139	155	88
Engineering, n.e.c.	1,227	1,399	1,387	1,309	1,120	1,290	1,255	1,125	1,008
Sciences, total	52,740	51,991	53,176	51,685	53,329	53,076	51,966	52,143	55,736
Physical sciences	6,090	6,185	6,705	6,513	6,645	6,935	6,779	6,528	6,837
Astronomy	127	146	123	129	155	143	172	159	160
Chemistry	3,609	3,757	3,995	3,779	3,880	3,922	3,764	3,660	3,852
Physics	2,318	2,260	2,562	2,534	2,550	2,794	2,772	2,663	2,778
Physical sciences, n.e.c.	36	22	25	71	60	76	71	46	47
Earth, atmospheric, and ocean sciences	3,451	3,648	3,775	3,387	3,275	3,091	2,609	2,603	2,679
Atmospheric sciences	242	224	210	226	286	263	256	213	211
Geosciences	2,256	2,466	2,707	2,353	2,135	1,958	1,555	1,496	1,452
Oceanography	408	410	421	415	392	414	366	390	443
Earth, atm. & oc. sci., n.e.c.	545	548	437	393	462	456	432	504	573
Mathematical sciences	3,435	3,694	3,600	3,738	3,985	4,029	3,900	3,928	4,277
Computer sciences	2,923	3,330	3,898	4,056	4,774	5,033	5,135	5,229	5,734
Agricultural sciences	2,910	2,914	2,793	2,658	2,418	2,364	2,160	2,166	2,311
Biological sciences	9,944	9,626	9,907	9,870	9,887	9,808	9,852	9,831	10,087
Anatomy	226	219	218	252	197	234	239	255	243
Biochemistry	911	933	1,007	1,035	1,098	1,100	993	1,032	1,078
Biology	2,683	2,581	2,588	2,636	2,415	2,385	2,457	2,406	2,497
Biometry/epidemiology	332	270	253	240	367	392	397	436	446
Biophysics	87	103	97	83	64	93	102	130	125
Botany	761	796	754	687	678	690	628	619	568
Cell biology	197	223	255	299	345	383	435	472	490
Ecology	210	192	192	178	207	171	149	189	155
Entomology/parasitology	343	283	260	272	249	236	247	204	199
Genetics	227	241	255	256	271	277	287	260	307
Microbiology	900	891	955	956	965	921	905	940	981
Nutrition	958	949	975	927	947	886	938	830	834
Pathology	277	247	282	273	255	250	266	245	270
Pharmacology	463	432	490	459	510	485	484	476	483
Physiology	589	519	566	616	629	604	579	596	590
Zoology	536	484	526	421	406	426	433	403	423
Biosciences, n.e.c.	244	263	234	280	284	275	313	338	398
Psychology	8,122	7,569	7,804	7,558	7,837	7,703	7,820	8,223	9,085
Social sciences	15,865	15,025	14,694	13,905	14,508	14,113	13,711	13,635	14,726
Agricultural economics	675	639	665	679	663	616	520	598	612
Anthropology	962	917	854	890	982	936	984	980	1,058
Economics (except agricultural)	3,072	3,096	2,887	2,660	2,684	2,689	2,494	2,597	2,570
Geography	784	719	745	680	717	688	716	706	749
History and philosophy of science	26	53	52	59	53	61	65	60	72
Linguistics	766	658	798	790	685	700	648	698	655
Political science	5,573	5,402	5,173	4,727	5,198	5,152	4,688	4,655	5,290
Sociology	1,369	1,244	1,225	1,218	1,181	1,181	1,354	1,307	1,467
Sociology/anthropology	182	223	214	159	198	206	200	213	204
Social sciences, n.e.c.	2,456	2,074	2,081	2,043	2,147	1,884	2,042	1,821	2,049
Health fields	11,057	10,464	9,891	9,940	9,809	9,691	10,047	10,114	10,568
Dentistry	308	277	262	317	314	381	403	388	419
Neurology	40	47	71	86	91	93	120	134	169
Nursing	3,449	3,056	2,770	2,606	2,471	2,271	2,332	2,319	2,233
Pharmaceutical sciences	509	455	454	460	443	452	451	424	518
Preventive medicine/community health	2,279	2,219	1,975	2,075	2,098	2,016	2,043	1,946	2,021
Speech pathology/audiology	2,453	2,471	2,363	2,415	2,419	2,328	2,195	2,382	2,422
Veterinary sciences	95	99	119	112	126	132	154	160	153
Clinical medicine, n.e.c.	267	378	366	324	387	420	424	427	529
Health related, n.e.c.	1,657	1,462	1,511	1,545	1,460	1,598	1,925	1,934	2,104

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-31. Full-time science/engineering graduate students beyond first year in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	162,997	165,380	171,399	174,808	177,885	185,038	191,894	196,537	200,397
Total, science/engineering fields	149,471	152,470	158,176	161,381	163,842	170,851	177,237	181,233	183,921
Engineering, total	29,380	31,856	35,058	36,375	37,849	40,127	42,702	44,105	44,662
Aerospace	920	990	1,226	1,095	1,272	1,343	1,452	1,620	1,736
Agricultural	446	491	500	523	529	648	679	637	649
Biomedical	599	581	665	786	770	867	975	1,041	1,162
Chemical	3,291	3,729	4,045	4,139	4,013	4,081	4,307	4,095	3,927
Civil	5,589	6,017	6,216	6,613	6,414	6,457	6,548	6,874	6,666
Electrical	6,396	7,067	8,555	8,757	9,877	10,655	11,603	12,071	12,686
Engineering science	891	903	957	900	928	1,004	1,010	1,088	943
Industrial	2,400	2,426	2,117	2,248	2,304	2,366	2,726	2,814	3,007
Mechanical	3,965	4,564	5,209	5,569	5,845	6,381	6,930	7,225	7,083
Metallurgical/materials	1,831	1,825	1,951	2,148	2,293	2,561	2,556	2,622	2,795
Mining	258	257	271	311	275	308	324	302	271
Nuclear	706	711	717	735	756	764	741	814	820
Petroleum	279	300	413	462	445	426	505	444	418
Engineering, n.e.c.	1,809	1,995	2,216	2,089	2,128	2,266	2,346	2,458	2,499
Sciences, total	120,091	120,614	123,118	125,006	125,993	130,724	134,535	137,128	139,259
Physical sciences	17,218	17,855	18,500	19,339	20,024	20,829	21,635	22,046	22,327
Astronomy	438	444	462	467	480	511	509	546	602
Chemistry	10,110	10,530	11,028	11,344	11,700	12,075	12,471	12,428	12,409
Physics	6,619	6,812	6,933	7,430	7,737	8,163	8,532	8,975	9,229
Physical sciences, n.e.c.	51	69	77	98	107	80	123	97	87
Earth, atmospheric, and ocean sciences	7,587	7,788	8,274	8,432	8,164	8,232	7,934	7,693	7,409
Atmospheric sciences	503	555	575	550	586	592	568	616	599
Geosciences	4,773	5,055	5,496	5,740	5,568	5,426	5,111	4,818	4,487
Oceanography	1,214	1,183	1,191	1,184	1,170	1,280	1,285	1,239	1,347
Earth, atm. & oc. sci., n.e.c.	1,097	995	1,012	958	840	934	970	1,020	976
Mathematical sciences	6,719	7,129	7,364	7,581	7,848	8,369	9,168	9,626	9,515
Computer sciences	4,522	5,841	6,789	7,531	9,327	10,277	10,437	10,367	10,292
Agricultural sciences	7,166	6,977	7,043	7,092	6,679	6,865	6,823	6,820	6,634
Biological sciences	27,638	27,363	27,205	27,610	27,475	28,370	28,924	29,933	30,925
Anatomy	737	718	703	684	694	659	701	730	787
Biochemistry	2,857	2,917	3,000	3,228	3,390	3,564	3,646	3,736	3,834
Biology	6,796	6,463	6,422	6,335	6,116	6,192	6,228	6,477	6,862
Biometry/epidemiology	667	649	624	511	629	663	727	740	732
Biophysics	370	320	340	336	317	356	366	414	485
Botany	2,295	2,373	2,289	2,306	2,158	2,193	2,084	2,066	2,017
Cell biology	792	887	883	910	1,061	1,272	1,465	1,556	1,663
Ecology	729	718	652	699	669	686	647	647	724
Entomology/parasitology	1,109	1,057	1,045	992	889	871	815	857	810
Genetics	646	683	709	730	786	894	921	927	976
Microbiology	2,608	2,626	2,749	2,870	2,914	2,950	3,149	3,405	3,377
Nutrition	2,230	2,171	2,013	2,091	2,093	2,169	2,076	2,053	2,047
Pathology	776	774	786	810	781	820	869	881	899
Pharmacology	1,451	1,508	1,514	1,539	1,554	1,551	1,520	1,594	1,731
Physiology	1,335	1,286	1,200	1,353	1,357	1,401	1,417	1,412	1,467
Zoology	1,712	1,652	1,526	1,442	1,312	1,294	1,354	1,316	1,351
Biosciences, n.e.c.	528	561	750	774	755	835	939	1,122	1,163
Psychology	18,603	18,249	18,897	18,550	17,932	18,818	19,606	20,189	21,136
Social sciences	30,638	29,412	29,046	28,871	28,544	28,964	30,008	30,454	31,021
Agricultural economics	1,363	1,339	1,382	1,348	1,327	1,348	1,337	1,311	1,300
Anthropology	3,361	3,188	3,086	3,078	2,924	3,115	3,114	3,286	3,354
Economics (except agricultural)	6,315	6,383	6,328	6,164	6,291	6,328	6,553	6,497	6,625
Geography	1,449	1,420	1,457	1,495	1,407	1,420	1,574	1,509	1,602
History and philosophy of science	191	170	177	184	174	176	202	206	211
Linguistics	1,499	1,499	1,577	1,529	1,652	1,658	1,801	1,822	1,813
Political science	8,598	8,311	8,289	8,089	7,996	8,301	8,361	8,721	8,865
Sociology	4,032	3,631	3,569	3,527	3,463	3,414	3,672	3,777	3,804
Sociology/anthropology	393	434	457	447	367	378	360	353	429
Social sciences, n.e.c.	3,437	3,037	2,724	3,010	2,943	2,826	3,034	2,972	3,018
Health fields	13,526	12,910	13,223	13,427	14,043	14,187	14,657	15,304	16,476
Dentistry	453	450	439	451	431	444	506	542	589
Neurology	149	155	187	227	244	280	355	461	499
Nursing	3,688	3,556	3,434	3,507	3,574	3,607	3,592	3,705	3,754
Pharmaceutical sciences	1,179	1,248	1,243	1,239	1,275	1,311	1,296	1,405	1,497
Preventive medicine/community health	2,194	1,837	1,986	1,880	2,039	2,063	2,119	2,271	2,185
Speech pathology/audiology	2,941	2,973	3,022	2,997	3,177	3,174	3,000	3,009	3,427
Veterinary sciences	277	279	244	313	389	374	438	446	515
Clinical medicine, n.e.c.	747	705	724	714	778	737	802	874	904
Health related, n.e.c.	1,898	1,707	1,944	2,099	2,136	2,197	2,549	2,591	3,106

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-32. Full-time science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1981-89

Field, citizenship, and racial/ethnic background	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields:	243,671	246,218	253,735	255,597	259,467	268,404	273,434	278,167	286,619
Total U.S. citizens	188,942	188,545	191,520	191,833	190,984	192,983	194,306	194,196	200,028
Black, non-Hispanic	5,607	6,417	6,673	6,628	6,502	6,502	6,525	7,114	7,698
American Indian/Alaskan Native	421	639	694	635	561	575	619	685	670
Asian/Pacific Islander	4,590	5,492	6,239	6,958	7,849	8,653	9,858	10,313	11,085
Hispanic	4,072	5,039	5,973	5,946	6,168	6,287	6,282	6,640	7,136
White, non-Hispanic	135,466	152,430	160,497	159,639	156,379	159,805	159,933	160,653	164,077
Other or unknown	38,786	18,528	11,444	12,027	13,525	11,161	11,089	8,791	9,362
Foreign	54,729	57,673	62,215	63,764	68,483	75,421	79,128	83,971	86,591
Sciences, total:	172,831	172,605	176,294	176,691	179,322	183,800	186,501	189,271	194,995
Total U.S. citizens	140,070	138,665	139,373	138,583	137,540	138,196	138,288	138,064	141,909
Black, non-Hispanic	4,484	5,108	5,228	5,123	4,933	4,868	4,928	5,281	5,656
American Indian/Alaskan Native	270	451	484	439	408	414	455	499	492
Asian/Pacific Islander	2,983	3,474	3,968	4,256	4,720	5,164	5,922	6,249	6,787
Hispanic	3,194	3,882	4,328	4,320	4,408	4,442	4,363	4,596	5,009
White, non-Hispanic	101,113	113,190	118,176	116,601	114,052	115,816	115,427	115,720	118,185
Other or unknown	28,026	12,560	7,189	7,844	9,019	7,492	7,193	5,719	5,780
Foreign	32,761	33,940	36,921	38,108	41,782	45,604	48,213	51,207	53,086
Physical sciences:	23,308	24,040	25,205	25,852	26,669	27,764	28,414	28,574	29,164
Total U.S. citizens	17,037	17,555	17,973	18,250	18,186	18,266	18,386	18,090	18,048
Black, non-Hispanic	328	418	412	437	379	391	406	443	479
American Indian/Alaskan Native	15	32	40	65	28	35	36	43	39
Asian/Pacific Islander	485	532	589	747	790	766	896	1,039	1,000
Hispanic	324	387	449	462	530	549	514	549	580
White, non-Hispanic	13,549	14,742	15,472	15,429	15,219	15,368	15,098	15,135	15,221
Other or unknown	2,336	1,444	1,011	1,110	1,240	1,157	1,436	882	729
Foreign	6,271	6,485	7,232	7,602	8,483	9,498	10,028	10,484	11,116
Earth, atmospheric, and ocean sciences:	11,038	11,436	12,049	11,819	11,439	11,323	10,543	10,296	10,088
Total U.S. citizens	9,534	9,789	10,358	10,224	9,748	9,432	8,575	8,116	7,777
Black, non-Hispanic	71	76	82	84	85	65	68	77	66
American Indian/Alaskan Native	10	17	24	18	19	17	15	23	21
Asian/Pacific Islander	101	136	155	144	155	124	143	173	162
Hispanic	130	132	145	193	184	179	183	167	167
White, non-Hispanic	7,114	8,388	9,320	8,804	8,482	8,458	7,699	7,386	7,115
Other or unknown	2,108	1,040	632	981	823	589	467	290	246
Foreign	1,504	1,647	1,691	1,595	1,691	1,891	1,968	2,180	2,311
Mathematical sciences:	10,154	10,823	10,964	11,319	11,833	12,398	13,068	13,554	13,792
Total U.S. citizens	6,513	6,935	6,722	6,781	7,009	7,253	7,574	7,777	7,853
Black, non-Hispanic	138	174	164	187	198	244	261	222	259
American Indian/Alaskan Native	5	20	12	4	6	9	21	16	20
Asian/Pacific Islander	246	298	337	304	413	468	504	472	487
Hispanic	162	174	205	176	165	165	194	225	224
White, non-Hispanic	4,793	5,571	5,585	5,575	5,656	5,876	5,947	6,320	6,394
Other or unknown	1,169	698	419	535	571	491	647	522	469
Foreign	3,641	3,888	4,242	4,538	4,824	5,145	5,494	5,777	5,939
Computer sciences:	7,445	9,171	10,687	11,587	14,101	15,310	15,572	15,596	16,026
Total U.S. citizens	4,887	5,981	6,724	7,052	8,551	9,176	9,087	8,776	8,996
Black, non-Hispanic	103	198	207	204	204	289	297	326	344
American Indian/Alaskan Native	3	15	11	37	45	10	15	12	17
Asian/Pacific Islander	264	365	558	545	735	884	1,062	1,140	1,116
Hispanic	54	105	105	115	130	161	161	162	199
White, non-Hispanic	3,428	4,339	5,053	5,345	6,006	6,659	6,635	6,419	6,476
Other or unknown	1,035	959	790	806	1,431	1,173	917	717	844
Foreign	2,558	3,190	3,963	4,535	5,550	6,134	6,485	6,820	7,030
Agricultural sciences:	10,076	9,891	9,836	9,750	9,097	9,229	8,983	8,986	8,945
Total U.S. citizens	7,701	7,508	7,368	7,329	6,759	6,685	6,366	6,376	6,397
Black, non-Hispanic	92	123	112	104	111	93	98	118	123
American Indian/Alaskan Native	9	12	20	18	13	17	15	19	18
Asian/Pacific Islander	97	117	113	127	110	113	146	185	225
Hispanic	134	164	182	200	267	250	180	231	251
White, non-Hispanic	6,328	6,556	6,690	6,756	6,009	6,028	5,793	5,643	5,561
Other or unknown	1,041	536	251	124	249	184	134	180	219
Foreign	2,375	2,383	2,468	2,421	2,338	2,544	2,617	2,610	2,548

See footnotes at end of table.

Table B-32. Full-time science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1981-89 -Continued

Field, citizenship, and racial/ethnic background	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Biological sciences:	37,582	36,989	37,112	37,480	37,362	38,178	38,776	39,764	41,012
Total U.S. citizens	32,727	31,950	31,579	31,660	30,990	30,943	30,685	30,681	30,973
Black, non-Hispanic	652	784	837	811	812	769	767	820	895
American Indian/Alaskan Native	33	67	90	70	74	88	79	83	74
Asian/Pacific Islander	805	906	1,031	1,126	1,252	1,352	1,452	1,594	1,829
Hispanic	457	618	723	680	764	762	840	918	987
White, non-Hispanic	25,470	27,761	28,015	28,223	27,122	27,172	26,598	26,558	26,314
Other or unknown	5,310	1,814	883	750	966	800	949	708	874
Foreign	4,855	5,039	5,533	5,820	6,372	7,235	8,091	9,083	10,039
Psychology:	26,725	25,818	26,701	26,108	25,769	26,521	27,426	28,412	30,221
Total U.S. citizens	25,721	24,739	25,607	25,063	24,608	25,351	26,212	27,082	28,874
Black, non-Hispanic	983	1,021	1,140	1,111	1,060	1,090	1,059	1,169	1,228
American Indian/Alaskan Native	48	78	93	82	89	99	113	121	129
Asian/Pacific Islander	328	319	368	384	381	445	555	580	640
Hispanic	955	1,032	1,134	1,148	1,008	1,141	1,100	1,117	1,265
White, non-Hispanic	16,001	19,198	21,345	20,636	20,485	21,197	22,306	22,948	24,589
Other or unknown	7,406	3,091	1,527	1,702	1,585	1,379	1,079	1,147	1,023
Foreign	1,004	1,079	1,094	1,045	1,161	1,170	1,214	1,330	1,347
Social sciences:	46,503	44,437	43,740	42,776	43,052	43,077	43,719	44,089	45,747
Total U.S. citizens	35,950	34,208	33,042	32,224	31,689	31,090	31,403	31,166	32,991
Black, non-Hispanic	2,117	2,314	2,274	2,185	2,084	1,927	1,972	2,107	2,262
American Indian/Alaskan Native	147	210	194	145	134	139	161	182	174
Asian/Pacific Islander	657	801	817	879	884	1,012	1,164	1,066	1,328
Hispanic	978	1,270	1,385	1,346	1,360	1,235	1,191	1,227	1,336
White, non-Hispanic	24,430	26,635	26,696	25,833	25,073	25,058	25,351	25,311	26,515
Other or unknown	7,621	2,978	1,676	1,836	2,154	1,719	1,564	1,273	1,376
Foreign	10,553	10,229	10,698	10,552	11,363	11,987	12,316	12,923	12,756
Engineering, total:	46,257	50,239	54,327	55,539	56,293	60,726	62,229	63,478	64,580
Total U.S. citizens	26,443	28,816	31,456	32,230	32,135	33,610	34,085	33,807	34,357
Black, non-Hispanic	425	519	663	700	704	770	725	839	960
American Indian/Alaskan Native	66	76	98	110	68	78	66	78	65
Asian/Pacific Islander	1,118	1,419	1,724	2,129	2,575	2,827	3,217	3,280	3,382
Hispanic	492	601	774	735	756	856	854	955	1,021
White, non-Hispanic	18,411	21,677	24,562	25,216	24,663	26,291	26,142	26,275	26,171
Other or unknown	5,931	4,524	3,635	3,340	3,369	2,788	3,081	2,380	2,758
Foreign	19,814	21,423	22,871	23,309	24,158	27,116	28,144	29,671	30,223
Chemical engineering:	4,989	5,608	5,869	5,734	5,546	5,594	5,674	5,359	5,265
Total U.S. citizens	2,787	3,267	3,630	3,603	3,337	3,412	3,362	2,967	2,677
Black, non-Hispanic	38	60	64	54	52	61	63	59	60
American Indian/Alaskan Native	6	9	9	7	6	2	26	22	5
Asian/Pacific Islander	130	219	235	260	200	230	287	253	184
Hispanic	41	63	60	97	74	86	91	110	93
White, non-Hispanic	1,933	2,650	3,032	2,946	2,818	2,846	2,766	2,435	2,236
Other or unknown	639	266	230	239	187	187	129	88	99
Foreign	2,202	2,341	2,239	2,131	2,209	2,182	2,312	2,392	2,588
Civil engineering:	9,208	9,768	10,191	10,466	10,102	10,370	9,884	10,198	10,168
Total U.S. citizens	5,468	5,718	5,826	5,955	5,576	5,585	5,254	5,375	5,262
Black, non-Hispanic	88	74	107	106	114	106	85	111	159
American Indian/Alaskan Native	6	6	12	9	9	16	5	13	14
Asian/Pacific Islander	238	214	251	260	293	307	366	340	362
Hispanic	123	129	172	185	160	186	167	176	169
White, non-Hispanic	3,966	4,499	4,688	4,719	4,514	4,560	4,228	4,446	4,317
Other or unknown	1,047	796	596	676	486	410	403	289	241
Foreign	3,740	4,050	4,365	4,511	4,526	4,785	4,630	4,823	4,906
Electrical engineering:	10,450	11,533	13,203	13,857	14,752	16,322	17,040	17,653	18,359
Total U.S. citizens	5,665	6,421	7,363	7,861	8,113	8,609	8,959	9,274	9,751
Black, non-Hispanic	121	144	200	219	228	256	237	291	320
American Indian/Alaskan Native	29	35	25	27	16	33	5	16	19
Asian/Pacific Islander	297	347	460	763	920	1,004	1,234	1,337	1,358
Hispanic	126	143	180	201	213	259	255	269	299
White, non-Hispanic	3,858	4,590	5,261	5,587	5,740	6,219	6,373	6,557	6,883
Other or unknown	1,234	1,162	1,237	1,064	996	838	855	804	872
Foreign	4,785	5,112	5,840	5,996	6,639	7,713	8,081	8,379	8,608

See footnotes at end of table.

Table B-32. Full-time science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1981-89 -Continued

Field, citizenship, and racial/ethnic background	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Industrial engineering:	3,642	3,831	3,334	3,438	3,530	3,889	4,261	4,406	4,773
Total U.S. citizens	2,047	2,205	1,962	1,967	1,907	2,088	2,196	2,289	2,496
Black, non-Hispanic	49	64	71	74	70	76	77	106	107
American Indian/Alaskan Native	1	3	3	15	5	2	4	4	8
Asian/Pacific Islander	55	123	80	83	125	178	174	199	218
Hispanic	60	89	58	60	84	98	90	105	119
White, non-Hispanic	1,358	1,689	1,671	1,632	1,476	1,604	1,642	1,681	1,845
Other or unknown	524	237	79	103	147	130	209	194	199
Foreign	1,595	1,626	1,372	1,471	1,623	1,801	2,065	2,117	2,277
Mechanical engineering:	6,422	7,267	8,330	8,698	8,875	9,801	10,175	10,438	10,394
Total U.S. citizens	3,363	3,767	4,327	4,591	4,858	5,226	5,526	5,314	5,594
Black, non-Hispanic	36	58	76	92	84	96	102	122	120
American Indian/Alaskan Native	3	3	11	9	11	5	12	8	6
Asian/Pacific Islander	116	181	213	272	451	481	524	462	512
Hispanic	59	70	64	66	95	100	108	110	120
White, non-Hispanic	2,165	2,550	3,568	3,687	3,469	4,045	4,013	4,067	3,863
Other or unknown	984	905	395	465	748	499	767	545	973
Foreign	3,059	3,500	4,003	4,107	4,017	4,575	4,649	5,124	4,800
Other engineering:	11,546	12,232	13,400	13,346	13,488	14,750	15,195	15,424	15,621
Total U.S. citizens	7,113	7,438	8,348	8,253	8,344	8,690	8,788	8,588	8,577
Black, non-Hispanic	93	119	145	155	156	175	161	150	194
American Indian/Alaskan Native	21	20	38	43	21	20	14	15	13
Asian/Pacific Islander	282	335	485	491	586	627	632	689	748
Hispanic	83	107	240	126	130	127	143	185	221
White, non-Hispanic	5,131	5,699	6,342	6,645	6,646	7,017	7,120	7,089	7,027
Other or unknown	1,503	1,158	1,098	793	805	724	718	460	374
Foreign	4,433	4,794	5,052	5,093	5,144	6,060	6,407	6,836	7,044
Health fields:	24,583	23,374	23,114	23,367	23,852	23,878	24,704	25,418	27,044
Total U.S. citizens	22,429	21,064	20,691	21,020	21,309	21,177	21,933	22,325	23,762
Black, non-Hispanic	698	790	782	805	865	864	872	994	1,082
American Indian/Alaskan Native	85	112	112	86	85	83	98	108	113
Asian/Pacific Islander	489	599	547	573	554	662	719	784	916
Hispanic	386	556	871	891	1,004	989	1,065	1,089	1,106
White, non-Hispanic	15,942	17,563	17,759	17,822	17,664	17,698	18,364	18,658	19,721
Other or unknown	4,829	1,444	620	843	1,137	881	815	692	824
Foreign	2,154	2,310	2,423	2,347	2,543	2,701	2,771	3,093	3,282

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

SOURCE: National Science Foundation, SRS

Table B-33. Full-time science/engineering graduate students in all institutions by field and source of major support: 1981-89

Field and source of major support	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields:									
Total, all sources	243,671	246,218	253,735	255,597	259,467	268,404	273,434	278,167	286,619
Federal, total	51,085	47,593	47,909	47,921	49,230	51,545	53,780	55,768	57,921
Dept of Defense	5,671	5,945	7,011	7,151	7,332	7,945	8,803	9,522	9,328
Dept of HHS, total	17,696	15,862	15,020	15,159	15,914	16,436	17,319	18,102	18,772
NIH	11,205	10,844	10,867	11,011	11,143	11,904	13,012	13,844	14,494
Other HHS	6,491	5,018	4,153	4,148	4,771	4,532	4,307	4,258	4,278
NSF	9,177	9,289	9,524	9,854	10,184	10,836	11,250	11,636	11,895
USDA	NA	NA	NA	NA	2,181	2,336	2,686	2,608	2,684
All other Federal	18,541	16,497	16,354	15,757	13,619	13,992	13,722	13,900	15,242
Institutional support	92,504	95,622	98,692	102,630	104,682	109,818	112,867	115,598	120,070
Other outside support, total	22,669	24,279	24,876	24,930	26,694	26,876	25,633	25,886	25,753
All other U.S.	13,823	15,187	15,871	16,727	18,873	19,154	18,451	18,926	19,307
Foreign	8,846	9,092	9,005	8,203	7,821	7,722	7,182	6,960	6,446
Self-support	77,413	78,724	82,258	80,116	78,861	80,165	81,154	80,915	82,875
Sciences, total:									
Total, all sources	172,831	172,605	176,294	176,691	179,322	183,800	186,501	189,271	194,995
Federal, total	32,124	30,050	30,160	30,434	31,683	33,019	34,111	35,295	36,918
Dept of Defense	2,325	2,294	2,737	3,065	3,278	3,598	3,978	4,305	4,066
Dept of HHS, total	11,385	10,490	10,212	10,375	10,723	11,340	12,038	12,780	13,437
NIH	9,686	9,180	9,196	9,506	9,628	10,321	11,012	11,853	12,379
Other HHS	1,699	1,310	1,016	869	1,095	1,019	1,026	927	1,058
NSF	6,781	6,682	6,813	7,116	7,456	7,665	7,722	7,782	8,068
USDA	NA	NA	NA	NA	1,993	2,100	2,382	2,379	2,428
All other Federal	11,633	10,584	10,398	9,878	8,233	8,316	7,991	8,049	8,919
Institutional support	73,551	75,040	77,167	79,656	80,407	83,438	85,363	87,508	90,187
Other outside support, total	14,213	15,067	15,048	14,536	15,343	15,045	14,249	14,478	14,436
All other U.S.	8,064	8,936	8,974	9,089	10,268	10,072	9,662	9,951	10,371
Foreign	6,149	6,131	6,074	5,447	5,075	4,973	4,587	4,527	4,065
Self-support	52,943	52,448	53,919	52,065	51,889	52,298	52,778	51,990	53,454
Physical sciences:									
Total, all sources	23,308	24,040	25,205	25,852	26,669	27,764	28,414	28,574	29,164
Federal, total	7,956	7,713	8,126	8,640	8,821	9,523	9,717	9,857	10,276
Dept of Defense	753	707	831	1,011	1,024	1,161	1,292	1,475	1,407
Dept of HHS, total	1,539	1,518	1,535	1,628	1,796	2,012	2,097	2,152	2,096
NIH	1,432	1,435	1,437	1,506	1,635	1,847	1,930	2,002	1,966
Other HHS	107	83	98	122	161	165	167	150	130
NSF	3,036	3,114	3,218	3,406	3,516	3,671	3,590	3,656	3,611
USDA	NA	NA	NA	NA	35	31	44	32	43
All other Federal	2,628	2,374	2,542	2,595	2,450	2,648	2,694	2,542	3,119
Institutional support	12,332	13,001	13,601	13,701	13,962	14,417	14,821	14,860	15,114
Other outside support, total	1,471	1,785	1,705	1,830	2,091	1,931	1,873	1,980	1,986
All other U.S.	1,097	1,330	1,237	1,391	1,656	1,588	1,596	1,662	1,753
Foreign	374	455	468	439	435	343	277	318	233
Self-support	1,549	1,541	1,773	1,681	1,795	1,893	2,003	1,877	1,788
Earth, atmospheric, and ocean sciences:									
Total, all sources	11,038	11,436	12,049	11,819	11,439	11,323	10,543	10,296	10,088
Federal, total	3,010	2,854	2,874	2,848	2,960	3,033	2,868	2,799	2,842
Dept of Defense	310	300	365	372	418	453	499	461	457
Dept of HHS, total	99	77	38	41	41	39	58	51	25
NIH	20	42	15	30	26	25	24	19	17
Other HHS	79	35	23	11	15	14	34	32	8
NSF	1,206	1,192	1,325	1,341	1,374	1,357	1,261	1,236	1,241
USDA	NA	NA	NA	NA	42	18	33	45	43
All other Federal	1,395	1,285	1,146	1,094	1,085	1,166	1,017	1,006	1,076
Institutional support	4,058	4,254	4,261	4,381	4,160	4,380	4,226	4,336	4,349
Other outside support, total	1,173	1,220	1,293	1,259	1,401	1,186	1,006	1,043	996
All other U.S.	790	856	985	940	1,038	874	679	679	682
Foreign	383	364	308	319	363	312	327	364	314
Self-support	2,797	3,108	3,621	3,331	2,918	2,724	2,443	2,118	1,901
Mathematical sciences:									
Total, all sources	10,154	10,823	10,964	11,319	11,833	12,398	13,068	13,554	13,792
Federal, total	796	818	760	762	935	999	1,091	1,190	1,267
Dept of Defense	343	374	310	304	386	432	438	513	451
Dept of HHS, total	35	39	41	26	21	24	30	28	36
NIH	24	25	28	22	18	19	24	25	28
Other HHS	11	14	13	4	3	5	6	3	8
NSF	227	228	223	279	321	357	436	463	475
USDA	NA	NA	NA	NA	13	18	16	20	22
All other Federal	191	177	186	153	194	168	171	166	283
Institutional support	6,729	7,159	7,493	7,767	8,111	8,485	8,836	9,136	9,390
Other outside support, total	533	544	511	632	549	598	548	617	572
All other U.S.	177	185	174	272	257	253	239	351	367
Foreign	356	359	337	360	292	345	309	266	205
Self-support	2,096	2,302	2,200	2,158	2,238	2,316	2,593	2,611	2,563

See footnotes at end of table.

Table B-33. Full-time science/engineering graduate students in all institutions by field and source of major support: 1981-89 -Continued

Field and source of major support	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Computer sciences:									
Total, all sources	7,445	9,171	10,687	11,587	14,101	15,310	15,572	15,596	16,026
Federal, total	1,008	1,075	1,130	1,269	1,638	1,892	2,084	2,226	2,347
Dept of Defense	394	387	475	630	860	1,037	1,137	1,214	1,184
Dept of HHS, total	50	47	29	25	21	45	62	64	72
NIH	48	42	26	24	20	43	61	64	53
Other HHS	2	5	3	1	1	2	1	0	19
NSF	379	389	386	431	502	527	623	634	767
USDA	NA	NA	NA	NA	NA	3	17	10	7
All other Federal	185	252	240	183	251	280	245	304	317
Institutional support	2,394	2,724	3,216	3,691	4,308	4,573	5,000	5,162	5,277
Other outside support, total	656	799	834	818	1,378	1,554	1,283	1,300	1,242
All other U.S.	446	579	576	563	1,024	1,218	983	971	933
Foreign	210	220	258	255	354	336	300	329	309
Self-support	3,387	4,573	5,507	5,809	6,777	7,291	7,205	6,908	7,160
Agricultural sciences:									
Total, all sources	10,076	9,891	9,836	9,750	9,097	9,229	8,983	8,986	8,945
Federal, total	1,732	1,671	1,545	1,395	1,539	1,638	1,699	1,742	1,766
Dept of Defense	11	8	15	17	28	17	30	32	13
Dept of HHS, total	59	38	25	18	17	15	29	32	28
NIH	53	33	19	17	17	14	22	31	17
Other HHS	6	5	6	1	0	1	7	1	11
NSF	70	72	67	68	94	71	59	49	47
USDA	NA	NA	NA	NA	682	896	937	943	988
All other Federal	1,592	1,553	1,438	1,292	718	639	644	686	690
Institutional support	3,487	3,514	3,645	3,929	3,449	3,599	3,565	3,446	3,457
Other outside support, total	2,161	2,046	2,111	1,955	1,875	1,774	1,595	1,684	1,638
All other U.S.	950	884	949	913	1,007	913	801	918	995
Foreign	1,211	1,162	1,162	1,042	868	861	794	766	643
Self-support	2,696	2,660	2,535	2,471	2,234	2,218	2,124	2,114	2,084
Biological sciences:									
Total, all sources	37,582	36,989	37,112	37,480	37,362	38,178	38,776	39,764	41,012
Federal, total	10,757	10,270	10,369	10,495	10,785	11,229	11,976	12,623	13,415
Dept of Defense	122	123	243	241	220	192	251	287	260
Dept of HHS, total	7,273	7,004	7,169	7,272	7,450	7,951	8,428	9,010	9,693
NIH	6,878	6,680	6,859	7,049	7,093	7,582	8,112	8,742	9,369
Other HHS	395	324	310	223	357	369	316	268	324
NSF	1,156	1,131	1,065	1,083	1,077	1,084	1,141	1,126	1,265
USDA	NA	NA	NA	NA	815	808	980	1,005	972
All other Federal	2,206	2,012	1,892	1,899	1,223	1,194	1,176	1,195	1,225
Institutional support	16,523	16,610	16,741	17,275	17,158	17,739	17,763	18,069	18,642
Other outside support, total	2,820	3,132	3,238	3,137	3,280	3,099	3,209	3,493	3,525
All other U.S.	1,713	2,019	2,089	2,104	2,339	2,157	2,320	2,639	2,701
Foreign	1,107	1,113	1,149	1,033	941	942	889	854	824
Self-support	7,482	6,977	6,764	6,573	6,139	6,111	5,828	5,579	5,430
Psychology:									
Total, all sources	26,725	25,818	26,701	26,108	25,769	26,521	27,426	28,412	30,221
Federal, total	3,055	2,414	2,141	2,062	2,057	2,035	2,052	2,167	2,208
Dept of Defense	144	128	174	157	140	158	177	156	117
Dept of HHS, total	1,663	1,323	1,024	1,043	1,056	950	1,009	1,124	1,174
NIH	926	716	600	647	622	589	630	763	728
Other HHS	737	607	424	396	434	361	379	361	446
NSF	246	206	190	206	235	231	246	233	236
USDA	NA	NA	NA	NA	13	9	18	25	29
All other Federal	1,002	757	753	656	613	687	602	629	652
Institutional support	9,429	9,355	9,825	10,251	10,514	10,947	10,906	11,320	11,891
Other outside support, total	1,531	1,397	1,353	1,379	1,379	1,414	1,280	1,057	1,171
All other U.S.	1,438	1,315	1,282	1,310	1,322	1,344	1,218	993	1,116
Foreign	93	82	71	69	57	70	62	64	55
Self-support	12,710	12,652	13,382	12,416	11,819	12,125	13,188	13,868	14,951
Social sciences:									
Total, all sources	46,503	44,437	43,740	42,776	43,052	43,077	43,719	44,089	45,747
Federal, total	3,810	3,235	3,215	2,963	2,948	2,670	2,624	2,691	2,797
Dept of Defense	248	267	324	333	202	148	154	167	177
Dept of HHS, total	667	444	351	322	321	304	325	319	313
NIH	305	207	212	211	197	202	209	207	201
Other HHS	362	237	139	111	124	102	116	112	112
NSF	461	350	339	302	337	367	366	385	426
USDA	NA	NA	NA	NA	389	317	337	299	324
All other Federal	2,434	2,174	2,201	2,006	1,699	1,534	1,442	1,521	1,557
Institutional support	18,599	18,423	18,385	18,661	18,745	19,298	20,246	21,179	22,067
Other outside support, total	3,868	4,144	4,003	3,526	3,390	3,489	3,455	3,304	3,306
All other U.S.	1,453	1,768	1,682	1,596	1,625	1,725	1,826	1,738	1,824
Foreign	2,415	2,376	2,321	1,930	1,765	1,764	1,629	1,566	1,482
Self-support	20,226	18,635	18,137	17,626	17,969	17,620	17,394	16,915	17,577

See footnotes at end of table.

Table B-33. Full-time science/engineering graduate students in all institutions by field and source of major support: 1981-89 -Continued

Field and source of major support	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Engineering, total:									
Total, all sources	46,257	50,239	54,327	55,539	56,293	60,726	62,229	63,478	64,580
Federal, total	10,974	11,095	11,985	11,590	11,267	12,379	13,131	14,031	14,253
Dept of Defense	3,160	3,455	4,014	3,808	3,774	4,115	4,587	4,972	4,820
Dept of HHS, total	549	505	575	544	524	536	629	628	718
NIH	446	403	477	466	455	449	515	555	644
Other HHS	103	102	98	78	69	87	114	73	74
NSF	2,368	2,573	2,681	2,697	2,687	3,130	3,480	3,808	3,776
USDA	NA	NA	NA	NA	164	194	256	197	210
All other Federal	4,897	4,562	4,715	4,541	4,118	4,404	4,179	4,426	4,729
Institutional support	14,366	15,569	16,464	17,514	18,527	20,410	21,452	21,656	22,783
Other outside support, total	7,152	7,856	8,205	8,751	9,681	10,241	9,784	10,092	9,852
All other U.S.	4,895	5,339	5,764	6,496	7,467	8,029	7,711	8,062	7,966
Foreign	2,257	2,517	2,441	2,255	2,214	2,212	2,073	2,030	1,886
Self-support	13,765	15,719	17,673	17,684	16,818	17,696	17,862	17,699	17,692
Chemical engineering:									
Total, all sources	4,989	5,608	5,869	5,734	5,546	5,594	5,674	5,359	5,265
Federal, total	1,290	1,282	1,361	1,315	1,289	1,394	1,501	1,452	1,446
Dept of Defense	56	76	99	92	90	101	150	145	130
Dept of HHS, total	53	52	53	67	53	69	78	83	87
NIH	45	39	41	60	52	67	70	79	87
Other HHS	8	13	12	7	1	2	8	4	0
NSF	519	547	602	606	622	652	692	683	654
USDA	NA	NA	NA	NA	9	6	24	7	13
All other Federal	662	607	607	550	515	566	557	534	562
Institutional support	1,708	1,956	2,056	2,038	2,022	2,048	2,055	2,021	1,959
Other outside support, total	1,038	1,215	1,255	1,355	1,356	1,314	1,340	1,287	1,303
All other U.S.	868	1,038	1,058	1,202	1,207	1,185	1,212	1,174	1,209
Foreign	170	177	197	153	149	129	128	113	94
Self-support	953	1,155	1,197	1,026	879	838	778	599	557
Civil engineering:									
Total, all sources	9,208	9,768	10,191	10,466	10,102	10,370	9,884	10,198	10,168
Federal, total	1,360	1,334	1,347	1,354	1,310	1,371	1,432	1,512	1,408
Dept of Defense	156	155	166	224	256	250	277	327	280
Dept of HHS, total	34	26	26	8	18	28	12	5	18
NIH	10	18	16	8	9	18	8	3	16
Other HHS	24	8	10	0	9	10	4	2	2
NSF	322	383	371	371	356	391	462	420	382
USDA	NA	NA	NA	NA	6	23	37	37	33
All other Federal	848	770	784	751	674	679	644	723	695
Institutional support	2,715	2,892	3,010	3,103	3,272	3,694	3,648	3,900	3,976
Other outside support, total	1,272	1,207	1,350	1,364	1,329	1,275	1,125	1,137	1,169
All other U.S.	754	678	816	878	890	824	707	711	696
Foreign	518	529	534	486	439	451	418	426	473
Self-support	3,861	4,335	4,484	4,645	4,191	4,030	3,679	3,649	3,615
Electrical engineering:									
Total, all sources	10,450	11,533	13,203	13,857	14,752	16,322	17,040	17,653	18,359
Federal, total	2,504	2,671	2,961	2,757	2,391	2,794	3,051	3,499	3,530
Dept of Defense	1,266	1,431	1,704	1,556	1,298	1,415	1,582	1,665	1,640
Dept of HHS, total	101	86	103	95	81	80	88	124	94
NIH	87	59	77	75	62	57	56	99	73
Other HHS	14	27	26	20	19	23	32	25	21
NSF	522	612	639	598	556	757	848	1,140	1,102
USDA	NA	NA	NA	NA	5	4	15	17	20
All other Federal	615	542	515	508	451	538	518	553	674
Institutional support	3,390	3,621	3,900	4,355	4,933	5,201	5,563	5,648	6,245
Other outside support, total	1,655	1,726	1,962	2,249	2,431	3,155	2,760	2,807	2,750
All other U.S.	1,235	1,296	1,466	1,716	1,848	2,533	2,183	2,361	2,346
Foreign	420	430	496	533	583	622	577	446	404
Self-support	2,901	3,515	4,380	4,496	4,997	5,172	5,666	5,699	5,834
Industrial engineering:									
Total, all sources	3,642	3,831	3,334	3,438	3,530	3,889	4,261	4,406	4,773
Federal, total	441	357	423	412	396	378	470	557	628
Dept of Defense	154	147	144	133	187	148	213	283	327
Dept of HHS, total	46	53	50	49	45	45	44	39	47
NIH	23	23	31	25	30	14	23	22	25
Other HHS	23	30	19	24	15	31	21	17	22
NSF	47	36	41	56	42	80	97	114	125
USDA	NA	NA	NA	NA	1	1	1	1	0
All other Federal	194	121	188	174	121	104	115	120	129
Institutional support	1,100	1,249	1,055	1,143	1,232	1,347	1,514	1,486	1,674
Other outside support, total	348	438	328	380	426	449	452	508	497
All other U.S.	157	193	174	264	316	360	370	396	389
Foreign	191	245	154	116	110	89	82	112	108
Self-support	1,753	1,787	1,528	1,503	1,476	1,715	1,825	1,855	1,974

See footnotes at end of table.

Table B-33. Full-time science/engineering graduate students in all institutions by field and source of major support: 1981-89 -Continued

Field and source of major support	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Mechanical engineering:									
Total, all sources	6,422	7,267	8,330	8,698	8,875	9,801	10,175	10,438	10,394
Federal, total	1,413	1,415	1,564	1,650	1,907	2,048	2,264	2,435	2,490
Dept of Defense	291	289	393	382	540	633	770	819	845
Dept of HHS, total	61	65	73	64	89	61	84	70	61
NIH	45	54	65	58	72	52	67	65	54
Other HHS	16	11	8	6	17	9	17	5	7
NSF	296	307	352	391	439	477	591	661	632
USDA	NA	NA	NA	NA	19	10	15	16	28
All other Federal	765	754	746	813	820	867	804	869	924
Institutional support	2,203	2,471	2,869	3,126	3,133	3,688	3,845	3,787	3,845
Other outside support, total	1,001	1,110	1,184	1,273	1,607	1,510	1,494	1,543	1,534
All other U.S.	745	855	872	957	1,354	1,255	1,278	1,310	1,334
Foreign	256	255	312	316	253	255	216	233	200
Self-support	1,805	2,271	2,713	2,649	2,228	2,555	2,572	2,673	2,525
Other engineering:									
Total, all sources	11,546	12,232	13,400	13,346	13,488	14,750	15,195	15,424	15,621
Federal, total	3,966	4,036	4,329	4,102	3,974	4,394	4,413	4,576	4,751
Dept of Defense	1,237	1,357	1,508	1,421	1,403	1,568	1,595	1,733	1,598
Dept of HHS, total	254	223	270	261	238	253	323	307	411
NIH	236	210	247	240	230	241	291	287	389
Other HHS	18	13	23	21	8	12	32	20	22
NSF	662	688	676	675	672	773	790	790	881
USDA	NA	NA	NA	NA	124	150	164	119	116
All other Federal	1,813	1,768	1,875	1,745	1,537	1,650	1,541	1,627	1,745
Institutional support	3,250	3,380	3,574	3,749	3,935	4,432	4,827	4,814	5,084
Other outside support, total	1,838	2,160	2,126	2,130	2,532	2,538	2,613	2,810	2,599
All other U.S.	1,136	1,279	1,378	1,479	1,852	1,872	1,961	2,110	1,992
Foreign	702	881	748	651	680	666	652	700	607
Self-support	2,492	2,656	3,371	3,365	3,047	3,386	3,342	3,224	3,187
Health fields:									
Total, all sources	24,583	23,374	23,114	23,367	23,852	23,878	24,704	25,418	27,044
Federal, total	7,987	6,448	5,764	5,897	6,280	6,147	6,538	6,442	6,750
Dept of Defense	186	196	260	278	280	232	238	245	442
Dept of HHS, total	5,762	4,867	4,233	4,240	4,667	4,560	4,652	4,694	4,617
NIH	1,073	1,261	1,194	1,039	1,060	1,134	1,485	1,436	1,471
Other HHS	4,689	3,606	3,039	3,201	3,607	3,426	3,167	3,258	3,146
NSF	28	34	30	41	41	41	48	46	51
USDA	NA	NA	NA	NA	24	42	48	32	46
All other Federal	2,011	1,351	1,241	1,338	1,268	1,272	1,552	1,425	1,594
Institutional support	4,587	5,013	5,061	5,460	5,748	5,970	6,052	6,434	7,100
Other outside support, total	1,304	1,356	1,623	1,643	1,670	1,590	1,600	1,316	1,465
All other U.S.	864	912	1,133	1,142	1,138	1,053	1,078	913	970
Foreign	440	444	490	501	532	537	522	403	495
Self-support	10,705	10,557	10,666	10,367	10,154	10,171	10,514	11,226	11,729

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-34. Full-time science/engineering graduate students supported by Federal sources in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	51,085	47,593	47,909	47,921	49,230	51,545	53,780	55,768	57,921
Total, science/engineering fields	43,098	41,145	42,145	42,024	42,950	45,398	47,242	49,326	51,171
Engineering, total	10,974	11,095	11,985	11,590	11,267	12,379	13,131	14,031	14,253
Aerospace	702	760	878	847	871	967	993	1,042	1,085
Agricultural	147	135	145	147	212	184	218	141	152
Biomedical	221	229	252	259	241	331	347	351	474
Chemical	1,290	1,282	1,361	1,315	1,289	1,394	1,501	1,452	1,446
Civil	1,360	1,334	1,347	1,354	1,310	1,371	1,432	1,512	1,408
Electrical	2,504	2,671	2,961	2,757	2,391	2,794	3,051	3,499	3,530
Engineering science	628	598	679	568	465	454	456	547	428
Industrial	441	357	423	412	396	378	470	557	628
Mechanical	1,413	1,415	1,564	1,650	1,907	2,048	2,264	2,435	2,490
Metallurgical/materials	1,208	1,147	1,198	1,164	1,219	1,389	1,304	1,366	1,518
Mining	171	102	86	97	91	120	125	126	92
Nuclear	273	299	364	344	311	323	307	358	402
Petroleum	53	58	46	64	47	40	72	43	25
Engineering, n.e.c.	563	708	681	612	517	586	591	602	575
Sciences, total	32,124	30,050	30,160	30,434	31,683	33,019	34,111	35,295	36,918
Physical sciences	7,956	7,713	8,126	8,640	8,821	9,523	9,717	9,857	10,276
Astronomy	254	218	255	267	303	323	293	318	337
Chemistry	4,297	4,319	4,426	4,609	4,757	5,104	5,137	5,180	5,348
Physics	3,397	3,171	3,426	3,731	3,729	4,075	4,238	4,338	4,573
Physical sciences, n.e.c.	8	5	19	33	32	21	49	21	18
Earth, atmospheric, and ocean sciences	3,010	2,854	2,874	2,848	2,960	3,033	2,868	2,799	2,842
Atmospheric sciences	475	485	492	495	571	546	556	525	492
Geosciences	1,493	1,407	1,501	1,450	1,498	1,494	1,326	1,311	1,342
Oceanography	694	685	659	692	692	765	796	722	784
Earth, atm. & oc. sci., n.e.c.	348	277	222	211	199	228	190	241	224
Mathematical sciences	796	818	760	762	935	999	1,091	1,190	1,267
Computer sciences	1,008	1,075	1,130	1,269	1,638	1,892	2,084	2,226	2,347
Agricultural sciences	1,732	1,671	1,545	1,395	1,539	1,638	1,699	1,742	1,766
Biological sciences	10,757	10,270	10,369	10,495	10,785	11,229	11,976	12,623	13,415
Anatomy	231	192	195	188	186	165	213	232	258
Biochemistry	1,816	1,869	1,984	2,020	2,110	2,181	2,199	2,375	2,435
Biology	1,827	1,726	1,684	1,683	1,552	1,640	1,701	1,739	1,945
Biometry/epidemiology	418	346	340	297	354	331	443	461	466
Biophysics	221	210	233	231	237	269	285	305	332
Botany	542	575	517	541	499	518	549	560	537
Cell biology	604	644	619	664	730	889	977	1,126	1,220
Ecology	172	157	163	139	133	138	117	103	135
Entomology/parasitology	312	265	263	229	262	219	274	277	229
Genetics	366	375	407	406	408	475	474	485	513
Microbiology	1,191	1,167	1,237	1,311	1,349	1,428	1,606	1,711	1,787
Nutrition	594	548	476	465	540	537	566	527	567
Pathology	329	316	338	350	356	350	337	323	356
Pharmacology	844	797	811	795	867	891	866	939	1,062
Physiology	650	537	503	578	580	568	578	623	602
Zoology	372	303	272	261	239	210	290	280	342
Biosciences, n.e.c.	268	243	327	337	383	420	501	557	629
Psychology	3,055	2,414	2,141	2,062	2,057	2,035	2,052	2,167	2,208
Social sciences	3,810	3,235	3,215	2,963	2,948	2,670	2,624	2,691	2,797
Agricultural economics	494	396	446	434	499	469	466	466	446
Anthropology	408	333	293	258	270	291	284	285	300
Economics (except agricultural)	443	304	303	256	319	280	283	312	356
Geography	113	127	101	138	142	154	167	180	183
History and philosophy of science	7	11	12	12	15	18	21	24	37
Linguistics	174	239	296	183	162	155	129	76	94
Political science	889	888	868	795	632	561	530	623	640
Sociology	659	455	378	361	411	388	371	387	376
Sociology/anthropology	24	30	32	29	48	38	33	41	32
Social sciences, n.e.c.	599	452	486	497	450	316	340	297	333
Health fields	7,987	6,448	5,764	5,897	6,280	6,147	6,538	6,442	6,750
Dentistry	80	76	67	72	94	103	72	76	80
Neurology	115	114	132	190	199	214	265	341	336
Nursing	3,984	3,305	2,921	2,795	3,036	2,924	2,774	2,703	2,562
Pharmaceutical sciences	348	292	243	270	260	266	293	280	341
Preventive medicine/community health	1,765	1,163	947	1,025	1,038	985	1,144	1,046	1,118
Speech pathology/audiology	730	668	625	685	632	601	672	716	749
Veterinary sciences	84	65	64	65	92	92	120	112	114
Clinical medicine, n.e.c.	279	340	375	293	295	314	360	429	450
Health related, n.e.c.	602	425	390	502	634	648	838	739	1,000

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-35. Full-time science/engineering graduate students supported by institutional sources in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	92,504	95,622	98,692	102,630	104,682	109,818	112,867	115,598	120,070
Total, science/engineering fields	87,917	90,609	93,631	97,170	98,934	103,848	106,815	109,164	112,970
Engineering, total	14,366	15,569	16,464	17,514	18,527	20,410	21,452	21,656	22,783
Aerospace	369	347	420	433	536	557	640	640	780
Agricultural	265	290	342	334	264	360	358	379	358
Biomedical	264	263	264	347	376	410	441	535	469
Chemical	1,708	1,956	2,056	2,038	2,022	2,048	2,055	2,021	1,959
Civil	2,715	2,892	3,010	3,103	3,272	3,694	3,648	3,900	3,976
Electrical	3,390	3,621	3,900	4,355	4,933	5,201	5,563	5,648	6,245
Engineering science	333	391	394	422	403	468	481	429	471
Industrial	1,100	1,249	1,055	1,143	1,232	1,347	1,514	1,486	1,674
Mechanical	2,203	2,471	2,869	3,126	3,133	3,688	3,845	3,787	3,845
Metallurgical/materials	535	557	561	590	663	791	924	876	949
Mining	63	97	137	134	128	129	141	111	139
Nuclear	321	281	280	307	323	357	315	322	334
Petroleum	123	121	177	173	178	184	249	233	282
Engineering, n.e.c.	977	1,033	999	1,009	1,064	1,176	1,278	1,289	1,302
Sciences, total	73,551	75,040	77,167	79,656	80,407	83,438	85,363	87,508	90,187
Physical sciences	12,332	13,001	13,601	13,701	13,962	14,417	14,821	14,860	15,114
Astronomy	244	290	278	276	276	275	314	327	366
Chemistry	7,657	8,018	8,632	8,558	8,603	8,706	9,025	8,894	8,966
Physics	4,386	4,640	4,646	4,826	5,042	5,385	5,440	5,595	5,735
Physical sciences, n.e.c.	45	53	45	41	41	51	42	44	47
Earth, atmospheric, and ocean sciences	4,058	4,254	4,261	4,381	4,160	4,380	4,226	4,336	4,349
Atmospheric sciences	116	129	152	147	120	126	120	184	174
Geosciences	2,970	3,158	3,194	3,274	3,142	3,147	2,911	2,932	2,810
Oceanography	413	426	386	445	448	533	561	628	735
Earth, atm. & oc. sci., n.e.c.	559	541	529	515	450	574	634	592	630
Mathematical sciences	6,729	7,159	7,493	7,767	8,111	8,485	8,836	9,136	9,390
Computer sciences	2,394	2,724	3,216	3,691	4,308	4,573	5,000	5,162	5,277
Agricultural sciences	3,487	3,514	3,645	3,929	3,449	3,599	3,565	3,446	3,457
Biological sciences	16,523	16,610	16,741	17,275	17,158	17,739	17,763	18,069	18,642
Anatomy	527	527	510	514	533	556	559	591	601
Biochemistry	1,385	1,382	1,440	1,618	1,706	1,821	1,786	1,743	1,831
Biology	4,842	4,782	4,857	4,944	4,878	4,836	4,888	5,022	5,237
Biometry/epidemiology	213	251	201	174	233	318	280	282	260
Biophysics	105	105	99	110	84	115	108	145	146
Botany	1,619	1,661	1,625	1,576	1,449	1,484	1,351	1,314	1,318
Cell biology	300	377	379	397	442	571	683	690	697
Ecology	462	444	435	490	502	518	493	538	564
Entomology/parasitology	643	616	607	655	569	626	489	494	476
Genetics	307	321	302	315	354	434	457	418	478
Microbiology	1,540	1,543	1,638	1,676	1,709	1,696	1,711	1,830	1,938
Nutrition	988	954	951	1,029	1,010	983	1,005	930	906
Pathology	319	318	339	391	349	399	446	476	471
Pharmacology	714	750	763	784	787	747	808	804	835
Physiology	756	746	779	821	862	875	878	916	1,033
Zoology	1,460	1,440	1,348	1,261	1,201	1,232	1,239	1,201	1,182
Biosciences, n.e.c.	343	393	468	520	490	528	582	675	669
Psychology	9,429	9,355	9,825	10,251	10,514	10,947	10,906	11,320	11,891
Social sciences	18,599	18,423	18,385	18,661	18,745	19,298	20,246	21,179	22,067
Agricultural economics	710	718	638	701	692	730	641	705	755
Anthropology	1,604	1,696	1,654	1,774	1,728	1,880	1,925	2,030	2,096
Economics (except agricultural)	4,432	4,562	4,548	4,504	4,542	4,618	4,764	4,809	5,063
Geography	1,232	1,225	1,213	1,207	1,186	1,241	1,280	1,268	1,388
History and philosophy of science	120	136	125	144	139	161	166	170	170
Linguistics	1,046	988	1,106	1,056	996	982	1,052	1,199	1,222
Political science	4,827	4,666	4,683	4,734	4,893	5,065	5,262	5,681	5,916
Sociology	2,693	2,550	2,530	2,583	2,547	2,557	2,761	2,889	3,001
Sociology/anthropology	340	345	323	318	304	346	319	333	396
Social sciences, n.e.c.	1,595	1,537	1,565	1,640	1,718	1,718	2,076	2,095	2,060
Health fields	4,587	5,013	5,061	5,460	5,748	5,970	6,052	6,434	7,100
Dentistry	274	297	278	309	287	303	361	380	407
Neurology	45	52	83	82	90	129	164	200	257
Nursing	497	641	796	873	699	762	729	947	974
Pharmaceutical sciences	835	861	799	811	827	946	894	986	1,014
Preventive medicine/community health	514	557	529	602	685	789	809	717	745
Speech pathology/audiology	1,330	1,490	1,499	1,518	1,666	1,560	1,502	1,582	1,710
Veterinary sciences	164	178	189	229	293	296	332	348	399
Clinical medicine, n.e.c.	377	379	302	315	450	414	439	409	515
Health related, n.e.c.	551	558	586	721	751	771	822	865	1,079

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-36. Full-time science/engineering graduate students supported by other outside sources in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	22,669	24,279	24,876	24,930	26,694	26,876	25,633	25,886	25,753
Total, science/engineering fields	21,365	22,923	23,253	23,287	25,024	25,286	24,033	24,570	24,288
Engineering, total	7,152	7,856	8,205	8,751	9,681	10,241	9,784	10,092	9,852
Aerospace	222	203	235	216	275	295	278	336	311
Agricultural	149	189	146	167	161	197	188	240	189
Biomedical	82	119	101	160	164	170	232	191	243
Chemical	1,038	1,215	1,255	1,355	1,356	1,314	1,340	1,287	1,303
Civil	1,272	1,207	1,350	1,364	1,329	1,275	1,125	1,137	1,169
Electrical	1,655	1,726	1,962	2,249	2,431	3,155	2,760	2,807	2,750
Engineering science	106	124	141	138	280	284	258	287	210
Industrial	348	438	328	380	426	449	452	508	497
Mechanical	1,001	1,110	1,184	1,273	1,607	1,510	1,494	1,543	1,534
Metallurgical/materials	458	513	586	674	784	731	710	797	828
Mining	123	111	102	92	98	98	75	85	66
Nuclear	243	257	209	202	227	237	272	255	252
Petroleum	134	188	185	158	192	177	198	205	137
Engineering, n.e.c.	321	456	421	323	351	349	402	414	363
Sciences, total	14,213	15,067	15,048	14,536	15,343	15,045	14,249	14,478	14,436
Physical sciences	1,471	1,785	1,705	1,830	2,091	1,931	1,873	1,980	1,986
Astronomy	32	45	27	28	37	30	40	23	22
Chemistry	1,009	1,240	1,093	1,173	1,316	1,277	1,184	1,200	1,285
Physics	429	497	580	625	719	611	633	742	675
Physical sciences, n.e.c.	1	3	5	4	19	13	16	15	4
Earth, atmospheric, and ocean sciences	1,173	1,220	1,293	1,259	1,401	1,186	1,006	1,043	996
Atmospheric sciences	47	51	60	71	81	76	55	54	64
Geosciences	791	838	899	841	925	796	650	691	682
Oceanography	158	172	204	192	168	123	114	122	126
Earth, atm. & oc. sci., n.e.c.	177	159	130	155	227	191	187	176	124
Mathematical sciences	533	544	511	632	549	598	548	617	572
Computer sciences	656	799	834	818	1,378	1,554	1,283	1,300	1,242
Agricultural sciences	2,161	2,046	2,111	1,955	1,875	1,774	1,595	1,684	1,638
Biological sciences	2,820	3,132	3,238	3,137	3,280	3,099	3,209	3,493	3,525
Anatomy	44	36	48	54	42	56	48	38	52
Biochemistry	252	285	335	339	391	364	349	372	422
Biology	347	375	424	426	389	402	407	432	406
Biometry/epidemiology	103	96	107	89	88	86	95	129	121
Biophysics	21	22	25	18	12	27	41	31	83
Botany	450	491	470	482	492	417	412	435	421
Cell biology	33	49	86	81	120	122	148	131	135
Ecology	68	101	61	74	73	69	69	72	78
Entomology/parasitology	297	276	255	202	172	151	156	147	159
Genetics	61	85	80	68	123	101	115	131	137
Microbiology	236	305	283	316	373	322	357	416	371
Nutrition	398	459	477	416	419	441	445	504	485
Pathology	139	139	142	114	114	115	127	136	105
Pharmacology	148	170	187	194	211	201	190	215	214
Physiology	108	91	93	127	124	93	94	115	119
Zoology	72	98	113	99	79	85	74	63	73
Biosciences, n.e.c.	43	54	52	38	58	47	82	126	144
Psychology	1,531	1,397	1,353	1,379	1,379	1,414	1,280	1,057	1,171
Social sciences	3,868	4,144	4,003	3,526	3,390	3,489	3,455	3,304	3,306
Agricultural economics	358	372	377	353	309	300	329	294	350
Anthropology	183	137	177	155	189	149	155	170	162
Economics (except agricultural)	1,059	984	1,048	948	926	866	797	850	735
Geography	176	157	162	96	126	113	92	93	101
History and philosophy of science	20	16	22	13	13	11	30	16	18
Linguistics	202	192	213	320	281	323	257	237	204
Political science	1,132	1,464	1,191	891	854	966	1,054	1,005	1,046
Sociology	324	397	394	381	331	375	398	327	339
Sociology/anthropology	48	46	53	40	46	19	26	37	43
Social sciences, n.e.c.	366	379	366	329	315	367	315	275	308
Health fields	1,304	1,356	1,623	1,643	1,670	1,590	1,600	1,316	1,465
Dentistry	55	62	59	52	39	37	29	22	26
Neurology	15	20	37	26	18	18	36	39	55
Nursing	140	207	261	364	333	244	237	151	144
Pharmaceutical sciences	226	233	322	298	297	290	307	296	342
Preventive medicine/community health	297	306	383	370	423	476	467	316	386
Speech pathology/audiology	230	180	191	171	183	152	171	158	145
Veterinary sciences	72	64	59	74	55	64	78	77	81
Clinical medicine, n.e.c.	92	99	120	96	128	107	101	101	101
Health related, n.e.c.	177	185	191	192	194	202	174	156	185

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-37. Self-supported full-time science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	77,413	78,724	82,258	80,116	78,861	80,165	81,154	80,915	82,875
Total, science/engineering fields	66,708	68,167	71,592	69,749	68,707	69,994	70,640	69,689	71,146
Engineering, total	13,765	15,719	17,673	17,684	16,818	17,696	17,862	17,699	17,692
Aerospace	190	212	307	358	312	335	461	515	542
Agricultural	111	125	133	125	130	140	160	119	152
Biomedical	300	320	414	355	348	383	372	378	425
Chemical	953	1,155	1,197	1,026	879	838	778	599	557
Civil	3,861	4,335	4,484	4,645	4,191	4,030	3,679	3,649	3,615
Electrical	2,901	3,515	4,380	4,496	4,997	5,172	5,666	5,699	5,834
Engineering science	153	164	142	144	116	239	191	171	165
Industrial	1,753	1,787	1,528	1,503	1,476	1,715	1,825	1,855	1,974
Mechanical	1,805	2,271	2,713	2,649	2,228	2,555	2,572	2,673	2,525
Metallurgical/materials	253	261	359	444	422	436	459	382	392
Mining	32	63	103	101	74	95	94	93	58
Nuclear	195	205	199	165	169	142	150	170	124
Petroleum	83	109	212	219	160	171	125	118	62
Engineering, n.e.c.	1,175	1,197	1,502	1,454	1,316	1,445	1,330	1,278	1,267
Sciences, total	52,943	52,448	53,919	52,065	51,889	52,298	52,778	51,990	53,454
Physical sciences	1,549	1,541	1,773	1,681	1,795	1,893	2,003	1,877	1,788
Astronomy	35	37	25	25	19	26	34	37	37
Chemistry	756	710	872	783	904	910	889	814	662
Physics	725	764	843	782	797	886	993	963	1,024
Physical sciences, n.e.c.	33	30	33	91	75	71	87	63	65
Earth, atmospheric, and ocean sciences	2,797	3,108	3,621	3,331	2,918	2,724	2,443	2,118	1,901
Atmospheric sciences	107	114	81	63	100	107	93	66	80
Geosciences	1,775	2,118	2,609	2,528	2,138	1,947	1,779	1,380	1,105
Oceanography	357	310	363	270	254	273	180	157	145
Earth, atm. & oc. sci., n.e.c.	558	566	568	470	426	397	391	515	571
Mathematical sciences	2,096	2,302	2,200	2,158	2,238	2,316	2,593	2,611	2,563
Computer sciences	3,387	4,573	5,507	5,809	6,777	7,291	7,205	6,908	7,160
Agricultural sciences	2,696	2,660	2,535	2,471	2,234	2,218	2,124	2,114	2,084
Biological sciences	7,482	6,977	6,764	6,573	6,139	6,111	5,828	5,579	5,430
Anatomy	161	182	168	180	130	116	120	124	119
Biochemistry	315	314	248	286	281	298	305	278	224
Biology	2,463	2,161	2,045	1,918	1,712	1,699	1,689	1,690	1,771
Biometry/epidemiology	265	226	229	191	321	320	306	304	331
Biophysics	110	86	80	60	48	38	34	63	49
Botany	445	442	431	394	396	464	400	376	309
Cell biology	52	40	54	67	114	73	92	81	101
Ecology	237	208	185	174	168	132	117	123	102
Entomology/parasitology	200	183	180	178	135	111	143	143	145
Genetics	139	143	175	197	172	161	162	153	155
Microbiology	541	502	546	523	448	425	380	388	262
Nutrition	1,208	1,159	1,084	1,108	1,071	1,094	998	922	923
Pathology	266	248	249	228	217	206	225	191	237
Pharmacology	208	223	243	225	199	197	140	112	103
Physiology	410	431	391	443	420	469	446	354	303
Zoology	344	295	319	242	199	193	184	175	177
Biosciences, n.e.c.	118	134	137	159	108	115	87	102	119
Psychology	12,710	12,652	13,382	12,416	11,819	12,125	13,188	13,868	14,951
Social sciences	20,226	18,635	18,137	17,626	17,969	17,620	17,394	16,915	17,577
Agricultural economics	476	492	586	539	490	465	421	444	361
Anthropology	2,128	1,939	1,816	1,781	1,719	1,731	1,734	1,781	1,854
Economics (except agricultural)	3,453	3,629	3,316	3,116	3,188	3,253	3,203	3,123	3,041
Geography	712	630	726	734	670	600	751	674	679
History and philosophy of science	70	60	70	74	60	47	50	56	58
Linguistics	843	738	760	760	898	898	1,011	1,008	948
Political science	7,323	6,695	6,720	6,396	6,815	6,861	6,203	6,067	6,553
Sociology	1,725	1,473	1,492	1,420	1,355	1,275	1,496	1,481	1,555
Sociology/anthropology	163	236	263	219	167	181	180	155	162
Social sciences, n.e.c.	3,333	2,743	2,388	2,587	2,607	2,309	2,345	2,126	2,366
Health fields	10,705	10,557	10,666	10,367	10,154	10,171	10,514	11,226	11,729
Dentistry	352	292	297	335	325	382	447	452	495
Neurology	14	16	6	15	28	12	10	15	20
Nursing	2,516	2,459	2,226	2,081	1,977	1,948	2,184	2,223	2,307
Pharmaceutical sciences	279	317	333	320	334	261	253	267	318
Preventive medicine/community health	1,897	2,030	2,102	1,958	1,991	1,829	1,742	2,138	1,957
Speech pathology/audiology	3,104	3,106	3,070	3,038	3,115	3,189	2,850	2,935	3,245
Veterinary sciences	52	71	51	57	75	54	62	69	74
Clinical medicine, n.e.c.	266	265	293	334	292	322	326	362	367
Health related, n.e.c.	2,225	2,001	2,288	2,229	2,017	2,174	2,640	2,765	2,946

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-38. Full-time science/engineering graduate students
in all institutions
by field and type of major support: 1981-89

Field and type of major support	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields:									
Total, all types:	243,671	246,218	253,735	255,597	259,467	268,404	273,434	278,167	286,619
Fellowships and traineeships:	37,183	35,808	35,241	35,478	36,634	37,199	36,661	37,432	38,901
Research assistantships:	52,880	52,701	55,069	57,863	61,162	66,224	70,384	74,727	79,151
Teaching assistantships:	55,830	58,412	60,192	61,406	62,013	62,737	63,040	63,392	64,573
Other types of support:	97,778	99,297	103,233	100,850	99,658	102,244	103,349	102,616	103,994
Sciences, total:									
Total, all types:	172,831	172,605	176,294	176,691	179,322	183,800	186,501	189,271	194,995
Fellowships and traineeships:	24,055	23,256	23,317	23,450	24,165	24,718	24,431	25,505	26,439
Research assistantships:	36,832	36,380	37,774	39,631	40,965	43,323	45,512	48,308	51,288
Teaching assistantships:	45,480	46,955	47,961	48,528	48,958	49,236	49,605	49,924	51,014
Other types of support:	66,464	66,014	67,242	65,082	65,234	66,523	66,953	65,534	66,254
Physical sciences:									
Total, all types:	23,308	24,040	25,205	25,852	26,669	27,764	28,414	28,574	29,164
Fellowships and traineeships:	2,301	2,337	2,328	2,448	2,347	2,419	2,388	2,323	2,591
Research assistantships:	8,607	8,768	9,145	9,628	10,284	10,994	11,558	12,056	12,413
Teaching assistantships:	10,304	10,711	11,270	11,339	11,467	11,654	11,752	11,600	11,726
Other types of support:	2,096	2,224	2,462	2,437	2,571	2,697	2,716	2,595	2,434
Earth, atmospheric, and ocean sciences:									
Total, all types:	11,038	11,436	12,049	11,819	11,439	11,323	10,543	10,296	10,088
Fellowships and traineeships:	1,122	1,155	1,152	1,140	1,158	995	917	926	868
Research assistantships:	3,469	3,339	3,545	3,574	3,723	3,834	3,660	3,891	4,124
Teaching assistantships:	2,651	2,849	2,881	2,865	2,647	2,659	2,498	2,553	2,464
Other types of support:	3,796	4,093	4,471	4,240	3,911	3,835	3,468	2,926	2,632
Mathematical sciences:									
Total, all types:	10,154	10,823	10,964	11,319	11,833	12,398	13,068	13,554	13,792
Fellowships and traineeships:	815	813	818	925	1,006	1,050	1,046	1,159	1,213
Research assistantships:	760	845	803	872	998	1,038	1,111	1,227	1,304
Teaching assistantships:	5,748	6,074	6,445	6,624	6,814	7,154	7,461	7,598	7,846
Other types of support:	2,831	3,091	2,898	2,898	3,015	3,156	3,450	3,570	3,429
Computer sciences:									
Total, all types:	7,445	9,171	10,687	11,587	14,101	15,310	15,572	15,596	16,026
Fellowships and traineeships:	497	485	538	642	854	944	887	922	1,119
Research assistantships:	1,098	1,191	1,403	1,635	2,076	2,354	2,837	3,054	3,202
Teaching assistantships:	1,782	2,074	2,411	2,748	3,216	3,251	3,404	3,434	3,460
Other types of support:	4,068	5,421	6,335	6,562	7,955	8,761	8,444	8,186	8,245
Agricultural sciences:									
Total, all types:	10,076	9,891	9,836	9,750	9,097	9,229	8,983	8,986	8,945
Fellowships and traineeships:	831	803	795	712	699	679	573	551	569
Research assistantships:	4,657	4,592	4,555	4,683	4,347	4,629	4,537	4,453	4,666
Teaching assistantships:	824	923	900	867	857	782	758	866	781
Other types of support:	3,764	3,573	3,586	3,488	3,194	3,139	3,115	3,116	2,929
Biological sciences:									
Total, all types:	37,582	36,989	37,112	37,480	37,362	38,178	38,776	39,764	41,012
Fellowships and traineeships:	8,078	7,930	8,006	8,065	8,255	8,489	8,760	8,916	9,334
Research assistantships:	10,139	10,039	10,302	11,032	11,353	12,217	13,061	14,250	15,371
Teaching assistantships:	9,636	9,746	9,635	9,556	9,471	9,122	8,778	8,655	8,892
Other types of support:	9,729	9,274	9,169	8,827	8,283	8,350	8,177	7,943	7,415
Psychology:									
Total, all types:	26,725	25,818	26,701	26,108	25,769	26,521	27,426	28,412	30,221
Fellowships and traineeships:	3,260	3,026	2,653	2,772	2,879	2,750	2,674	2,781	2,732
Research assistantships:	2,890	2,723	2,962	3,027	3,082	3,119	3,231	3,743	3,900
Teaching assistantships:	5,014	4,928	5,007	5,048	5,182	5,365	5,376	5,512	5,743
Other types of support:	15,561	15,141	16,079	15,261	14,626	15,287	16,145	16,376	17,846
Social sciences:									
Total, all types:	46,503	44,437	43,740	42,776	43,052	43,077	43,719	44,089	45,747
Fellowships and traineeships:	7,151	6,707	7,027	6,746	6,967	7,392	7,186	7,927	8,013
Research assistantships:	5,212	4,883	5,059	5,180	5,102	5,138	5,517	5,634	6,308
Teaching assistantships:	9,521	9,650	9,412	9,481	9,304	9,249	9,578	9,706	10,102
Other types of support:	24,619	23,197	22,242	21,369	21,679	21,298	21,438	20,822	21,324

See footnotes at end of table.

Table B-38. Full-time science/engineering graduate students in all institutions by field and type of major support: 1981-89 -Continued

Field and type of major support	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Engineering, total:	46,257	50,239	54,327	55,539	56,293	60,726	62,229	63,478	64,580
Total, all types:	5,122	5,506	5,602	5,613	5,571	5,782	5,591	5,426	5,763
Fellowships and traineeships:	14,482	14,701	15,638	16,345	17,965	20,490	22,169	23,468	24,636
Research assistantships:	8,289	9,206	10,059	10,563	10,772	11,124	11,125	11,196	11,140
Teaching assistantships:	18,364	20,826	23,028	23,018	21,985	23,330	23,344	23,388	23,041
Other types of support:									
Chemical engineering:	4,989	5,608	5,869	5,734	5,546	5,594	5,674	5,359	5,265
Total, all types:	806	1,028	1,019	1,032	943	931	929	814	801
Fellowships and traineeships:	2,018	2,099	2,255	2,329	2,454	2,582	2,745	2,814	2,813
Research assistantships:	935	1,048	1,129	1,121	1,065	1,000	994	954	903
Teaching assistantships:	1,230	1,433	1,466	1,252	1,084	1,081	1,006	777	748
Other types of support:									
Civil engineering:	9,208	9,768	10,191	10,466	10,102	10,370	9,884	10,198	10,168
Total, all types:	834	802	792	707	849	864	742	757	848
Fellowships and traineeships:	2,202	2,116	2,345	2,500	2,482	2,863	2,920	3,079	3,053
Research assistantships:	1,309	1,496	1,493	1,627	1,657	1,743	1,746	1,744	1,714
Teaching assistantships:	4,863	5,354	5,561	5,632	5,114	4,900	4,476	4,618	4,553
Other types of support:									
Electrical engineering:	10,450	11,533	13,203	13,857	14,752	16,322	17,040	17,653	18,359
Total, all types:	1,099	1,163	1,181	1,250	1,293	1,343	1,188	1,196	1,362
Fellowships and traineeships:	2,891	2,950	3,192	3,156	3,677	4,447	5,111	5,722	6,147
Research assistantships:	2,437	2,588	3,023	3,282	3,310	3,493	3,360	3,379	3,475
Teaching assistantships:	4,023	4,832	5,807	6,169	6,472	7,039	7,381	7,356	7,375
Other types of support:									
Industrial engineering:	3,642	3,831	3,334	3,438	3,530	3,889	4,261	4,406	4,773
Total, all types:	305	330	214	215	219	213	243	221	254
Fellowships and traineeships:	545	556	434	564	585	717	944	1,041	1,169
Research assistantships:	624	746	663	718	844	875	806	766	836
Teaching assistantships:	2,168	2,199	2,023	1,941	1,882	2,084	2,268	2,378	2,514
Other types of support:									
Mechanical engineering:	6,422	7,267	8,330	8,698	8,875	9,801	10,175	10,438	10,394
Total, all types:	639	708	737	764	756	808	778	732	758
Fellowships and traineeships:	2,138	2,213	2,371	2,663	3,280	3,672	3,936	4,076	4,249
Research assistantships:	1,451	1,667	1,992	2,080	2,082	2,165	2,226	2,290	2,249
Teaching assistantships:	2,194	2,679	3,230	3,191	2,757	3,156	3,235	3,340	3,138
Other types of support:									
Other engineering:	11,546	12,232	13,400	13,346	13,488	14,750	15,195	15,424	15,621
Total, all types:	1,439	1,475	1,659	1,645	1,511	1,623	1,711	1,706	1,740
Fellowships and traineeships:	4,688	4,767	5,041	5,133	5,487	6,209	6,513	6,736	7,205
Research assistantships:	1,533	1,661	1,759	1,735	1,814	1,848	1,993	2,063	1,963
Teaching assistantships:	3,886	4,329	4,941	4,833	4,676	5,070	4,978	4,919	4,713
Other types of support:									
Health fields:	24,583	23,374	23,114	23,367	23,852	23,878	24,704	25,418	27,044
Total, all types:	8,006	7,046	6,322	6,415	6,898	6,699	6,639	6,501	6,699
Fellowships and traineeships:	1,566	1,620	1,657	1,887	2,232	2,411	2,703	2,951	3,227
Research assistantships:	2,061	2,251	2,172	2,315	2,283	2,377	2,310	2,272	2,419
Teaching assistantships:	12,950	12,457	12,963	12,750	12,439	12,391	13,052	13,694	14,699
Other types of support:									

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

SOURCE: National Science Foundation, SRS

Table B-39. Full-time science/engineering graduate students in all institutions by type and source of major support: 1981-89

Type and source of major support	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all types:									
Total, all sources	243,671	246,218	253,735	255,597	259,467	268,404	273,434	278,167	286,619
Federal, total	51,085	47,593	47,909	47,921	49,230	51,545	53,780	55,768	57,921
Dept of Defense	5,671	5,945	7,011	7,151	7,332	7,945	8,803	9,522	9,328
Dept of HHS, total	17,696	15,862	15,020	15,159	15,914	16,436	17,319	18,102	18,772
NIH	11,205	10,844	10,867	11,011	11,143	11,904	13,012	13,844	14,494
Other HHS	6,491	5,018	4,153	4,148	4,771	4,532	4,307	4,258	4,278
NSF	9,177	9,289	9,524	9,854	10,184	10,836	11,250	11,636	11,895
USDA	NA	NA	NA	NA	2,181	2,336	2,686	2,608	2,684
All other Federal	18,541	16,497	16,354	15,757	13,619	13,992	13,722	13,900	15,242
Institutional support	92,504	95,622	98,692	102,630	104,682	109,818	112,867	115,598	120,070
Other outside support, total	22,669	24,279	24,876	24,930	26,694	26,876	25,633	25,886	25,753
All other U.S.	13,823	15,187	15,871	16,727	18,873	19,154	18,451	18,926	19,307
Foreign	8,846	9,092	9,005	8,203	7,821	7,722	7,182	6,960	6,446
Self-support	77,413	78,724	82,258	80,116	78,861	80,165	81,154	80,915	82,875
Fellowships:									
Total, all sources	20,315	21,074	21,655	21,936	22,882	23,593	22,536	23,008	24,461
Federal, total	4,123	4,128	4,141	4,143	4,441	4,621	4,476	4,615	5,393
Dept of Defense	189	204	257	240	263	294	366	356	521
Dept of HHS, total	949	839	776	791	879	832	865	888	962
NIH	671	629	574	611	636	660	702	711	730
Other HHS	278	210	202	180	243	172	163	177	232
NSF	1,274	1,308	1,307	1,341	1,400	1,513	1,492	1,590	1,785
USDA	NA	NA	NA	NA	150	166	151	95	102
All other Federal	1,711	1,777	1,801	1,771	1,749	1,816	1,602	1,686	2,023
Institutional support	9,286	9,509	10,039	10,444	11,327	12,045	11,923	12,386	12,996
Other outside support, total	6,906	7,437	7,475	7,349	7,114	6,927	6,137	6,007	6,072
All other U.S.	3,211	3,665	3,826	4,138	4,233	4,159	3,718	3,474	3,709
Foreign	3,695	3,772	3,649	3,211	2,881	2,768	2,419	2,533	2,363
Self-support	0	0	0	0	0	0	0	0	0
Traineeships:									
Total, all sources	16,868	14,734	13,586	13,542	13,752	13,606	14,125	14,424	14,440
Federal, total	12,263	10,167	9,181	9,034	9,039	8,771	9,039	8,779	8,774
Dept of Defense	76	34	84	62	49	79	137	136	118
Dept of HHS, total	10,124	8,746	7,713	7,550	7,665	7,425	7,388	7,307	7,119
NIH	4,717	4,666	4,497	4,297	4,094	3,942	4,258	4,138	4,088
Other HHS	5,407	4,080	3,216	3,253	3,571	3,483	3,130	3,169	3,031
NSF	144	90	61	49	56	27	83	68	89
USDA	NA	NA	NA	NA	71	57	87	44	48
All other Federal	1,919	1,297	1,323	1,373	1,198	1,183	1,344	1,224	1,400
Institutional support	3,514	3,440	3,301	3,517	3,715	3,879	4,173	4,678	4,718
Other outside support, total	1,091	1,127	1,104	991	998	956	913	967	948
All other U.S.	820	817	740	718	700	736	657	725	671
Foreign	271	310	364	273	298	220	256	242	277
Self-support	0	0	0	0	0	0	0	0	0
Research assistantships:									
Total, all sources	52,880	52,701	55,069	57,863	61,162	66,224	70,384	74,727	79,151
Federal, total	29,176	28,320	29,173	29,467	30,442	32,761	35,013	36,781	38,314
Dept of Defense	3,297	3,467	3,934	4,081	4,195	4,646	5,605	5,997	5,810
Dept of HHS, total	6,062	5,789	5,998	6,340	6,866	7,684	8,451	9,346	10,141
NIH	5,515	5,280	5,449	5,757	6,113	6,973	7,621	8,561	9,238
Other HHS	547	509	549	583	753	711	830	785	903
NSF	7,600	7,751	8,067	8,288	8,559	9,092	9,486	9,821	9,858
USDA	NA	NA	NA	NA	1,827	1,960	2,326	2,317	2,410
All other Federal	12,217	11,313	11,174	10,758	8,995	9,379	9,145	9,300	10,095
Institutional support	17,318	17,495	18,065	19,777	20,515	23,172	25,123	26,675	29,135
Other outside support, total	6,386	6,886	7,831	8,619	10,205	10,291	10,248	11,271	11,702
All other U.S.	5,778	6,298	7,271	8,020	9,655	9,703	9,640	10,653	11,029
Foreign	608	588	560	599	550	588	608	618	673
Self-support	0	0	0	0	0	0	0	0	0
Teaching assistantships:									
Total, all sources	55,830	58,412	60,192	61,406	62,013	62,737	63,040	63,392	64,573
Federal, total	620	429	501	406	562	497	447	504	525
Dept of Defense	0	0	0	0	0	0	0	0	0
Dept of HHS, total	117	108	112	73	98	110	153	143	158
NIH	74	49	75	44	59	82	125	118	143
Other HHS	43	59	37	29	39	28	28	25	15
NSF	61	27	25	28	43	75	27	58	68
USDA	NA	NA	NA	NA	40	33	17	44	33
All other Federal	442	294	364	305	381	279	250	259	266
Institutional support	54,802	57,507	59,300	60,563	60,929	61,712	62,112	62,400	63,492
Other outside support, total	408	476	391	437	522	528	481	488	556
All other U.S.	408	476	391	437	522	528	481	488	556
Foreign	0	0	0	0	0	0	0	0	0
Self-support	0	0	0	0	0	0	0	0	0

See footnotes at end of table.

Table B-39. Full-time science/engineering graduate students in all institutions by type and source of major support: 1981-89 -Continued

Type and source of major support	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Other types of support:									
Total, all sources	97,778	99,297	103,233	100,850	99,658	102,244	103,349	102,616	103,994
Federal, total	4,903	4,549	4,913	4,871	4,746	4,895	4,805	5,089	4,915
Dept of Defense	2,109	2,240	2,736	2,768	2,825	2,926	2,695	3,033	2,879
Dept of HHS, total	444	380	421	405	406	385	462	418	392
NIH	228	220	272	302	241	247	306	316	295
Other HHS	216	160	149	103	165	138	156	102	97
NSF	98	113	64	148	126	129	162	99	95
USDA	NA	NA	NA	NA	93	120	105	108	91
All other Federal	2,252	1,816	1,692	1,550	1,296	1,335	1,381	1,431	1,458
Institutional support	7,584	7,671	7,987	8,329	8,196	9,010	9,536	9,459	9,729
Other outside support, total	7,878	8,353	8,075	7,534	7,855	8,174	7,854	7,153	6,475
All other U.S.	3,606	3,931	3,643	3,414	3,763	4,028	3,955	3,586	3,342
Foreign	4,272	4,422	4,432	4,120	4,092	4,146	3,899	3,567	3,133
Self-support	77,413	78,724	82,258	80,116	78,861	80,165	81,154	80,915	82,875

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table B-40. Full-time science/engineering graduate students with U.S. citizenship in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	188,942	188,545	191,520	191,833	190,984	192,983	194,306	194,196	200,028
Total, science/engineering fields	166,513	167,481	170,829	170,813	169,675	171,806	172,373	171,871	176,266
Engineering, total	26,443	28,816	31,456	32,230	32,135	33,610	34,085	33,807	34,357
Aerospace	882	945	1,088	1,115	1,258	1,343	1,559	1,502	1,703
Agricultural	374	398	425	446	414	457	478	406	361
Biomedical	709	732	836	901	935	1,014	1,016	1,024	1,035
Chemical	2,787	3,267	3,630	3,603	3,337	3,412	3,362	2,967	2,677
Civil	5,468	5,718	5,826	5,955	5,576	5,585	5,254	5,375	5,262
Electrical	5,665	6,421	7,363	7,861	8,113	8,609	8,959	9,274	9,751
Engineering science	848	837	861	788	795	854	791	812	756
Industrial	2,047	2,205	1,962	1,967	1,907	2,088	2,196	2,289	2,496
Mechanical	3,363	3,767	4,327	4,591	4,858	5,226	5,526	5,314	5,594
Metallurgical/materials	1,342	1,297	1,530	1,663	1,802	1,841	1,803	1,778	1,871
Mining	234	251	273	283	256	250	239	196	157
Nuclear	605	569	591	606	600	614	594	644	628
Petroleum	198	216	330	327	327	305	326	237	207
Engineering, n.e.c.	1,921	2,193	2,414	2,124	1,957	2,012	1,982	1,989	1,859
Sciences, total	140,070	138,665	139,373	138,583	137,540	138,196	138,288	138,064	141,909
Physical sciences	17,037	17,555	17,973	18,250	18,186	18,266	18,386	18,090	18,048
Astronomy	472	488	480	479	485	494	509	545	604
Chemistry	10,502	11,071	11,498	11,488	11,485	11,484	11,295	10,764	10,550
Physics	5,987	5,915	5,911	6,136	6,072	6,157	6,410	6,674	6,792
Physical sciences, n.e.c.	76	81	84	147	144	131	172	107	102
Earth, atmospheric, and ocean sciences	9,534	9,789	10,358	10,224	9,748	9,432	8,575	8,116	7,777
Atmospheric sciences	566	592	603	612	676	649	605	598	576
Geosciences	6,144	6,608	7,280	7,194	6,758	6,365	5,565	5,119	4,668
Oceanography	1,376	1,253	1,235	1,302	1,250	1,304	1,295	1,192	1,276
Earth, atm. & oc. sci., n.e.c.	1,448	1,336	1,240	1,116	1,064	1,114	1,110	1,207	1,257
Mathematical sciences	6,513	6,935	6,722	6,781	7,009	7,253	7,574	7,777	7,853
Computer sciences	4,887	5,981	6,724	7,052	8,551	9,176	9,087	8,776	8,996
Agricultural sciences	7,701	7,508	7,368	7,329	6,759	6,685	6,366	6,376	6,397
Biological sciences	32,727	31,950	31,579	31,660	30,990	30,943	30,685	30,681	30,973
Anatomy	877	849	847	878	800	772	787	805	809
Biochemistry	3,174	3,192	3,232	3,416	3,512	3,566	3,430	3,452	3,423
Biology	8,596	8,193	8,049	7,868	7,437	7,325	7,311	7,354	7,641
Biometry/epidemiology	839	769	720	628	823	832	861	876	875
Biophysics	396	353	357	339	288	329	343	365	402
Botany	2,517	2,574	2,431	2,374	2,209	2,126	1,935	1,788	1,717
Cell biology	907	1,007	1,010	1,062	1,217	1,380	1,567	1,626	1,682
Ecology	866	830	766	790	776	757	686	713	745
Entomology/parasitology	1,189	1,113	1,065	1,040	904	855	767	775	718
Genetics	781	810	819	852	891	966	964	923	983
Microbiology	3,090	3,082	3,192	3,281	3,226	3,146	3,236	3,386	3,305
Nutrition	2,354	2,279	2,167	2,127	2,115	2,150	2,047	1,909	1,883
Pathology	869	847	862	914	847	866	884	876	877
Pharmacology	1,715	1,697	1,759	1,742	1,800	1,703	1,608	1,611	1,699
Physiology	1,744	1,617	1,554	1,714	1,721	1,687	1,646	1,561	1,517
Zoology	2,115	2,005	1,910	1,719	1,540	1,532	1,564	1,458	1,505
Biosciences, n.e.c.	698	733	839	916	884	951	1,049	1,203	1,192
Psychology	25,721	24,739	25,607	25,063	24,608	25,351	26,212	27,082	28,874
Social sciences	35,950	34,208	33,042	32,224	31,689	31,090	31,403	31,166	32,991
Agricultural economics	1,268	1,276	1,282	1,263	1,222	1,205	1,120	1,039	1,038
Anthropology	3,895	3,719	3,538	3,582	3,461	3,515	3,516	3,615	3,771
Economics (except agricultural)	5,713	5,925	5,667	5,249	4,975	4,914	4,790	4,599	4,708
Geography	1,863	1,748	1,816	1,803	1,764	1,724	1,865	1,808	1,924
History and philosophy of science	187	188	189	201	176	198	226	221	240
Linguistics	1,512	1,447	1,525	1,481	1,394	1,397	1,497	1,526	1,456
Political science	11,662	11,194	10,718	10,251	10,582	10,491	10,128	10,390	11,433
Sociology	4,357	3,890	3,693	3,676	3,439	3,352	3,691	3,661	3,895
Sociology/anthropology	474	523	542	484	437	460	434	442	499
Social sciences, n.e.c.	5,019	4,298	4,072	4,234	4,239	3,834	4,136	3,865	4,027
Total, health fields	22,429	21,064	20,691	21,020	21,309	21,177	21,933	22,325	23,762
Dentistry	588	598	579	638	590	646	764	774	838
Neurology	174	188	231	284	301	325	406	494	567
Nursing	6,912	6,410	6,045	5,941	5,879	5,718	5,761	5,841	5,817
Pharmaceutical sciences	1,149	1,116	1,078	1,069	1,085	1,082	1,071	1,032	1,123
Preventive medicine/community health	3,893	3,361	3,243	3,293	3,338	3,269	3,338	3,345	3,333
Speech pathology/audiology	5,170	5,231	5,128	5,200	5,373	5,251	4,964	5,121	5,573
Veterinary sciences	254	285	252	315	382	368	439	445	479
Clinical medicine, n.e.c.	898	933	922	920	976	960	1,013	1,066	1,185
Health related, n.e.c.	3,391	2,942	3,213	3,360	3,385	3,558	4,177	4,207	4,847

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-41. Foreign full-time science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	54,729	57,673	62,215	63,764	68,483	75,421	79,128	83,971	86,591
Total, science/engineering fields	52,575	55,363	59,792	61,417	65,940	72,720	76,357	80,878	83,309
Engineering, total	19,814	21,423	22,871	23,309	24,158	27,116	28,144	29,671	30,223
Aerospace	601	577	752	739	736	811	813	1,031	1,015
Agricultural	298	341	341	327	353	424	446	473	490
Biomedical	158	199	195	220	194	280	376	431	576
Chemical	2,202	2,341	2,239	2,131	2,209	2,182	2,312	2,392	2,588
Civil	3,740	4,050	4,365	4,511	4,526	4,785	4,630	4,823	4,906
Electrical	4,785	5,112	5,840	5,996	6,639	7,713	8,081	8,379	8,608
Engineering science	372	440	495	484	469	591	595	622	518
Industrial	1,595	1,626	1,372	1,471	1,623	1,801	2,065	2,117	2,277
Mechanical	3,059	3,500	4,003	4,107	4,017	4,575	4,649	5,124	4,800
Metallurgical/materials	1,112	1,181	1,174	1,209	1,286	1,506	1,594	1,643	1,816
Mining	155	122	155	141	135	192	196	219	198
Nuclear	427	473	461	412	430	445	450	461	484
Petroleum	195	260	290	287	250	267	318	362	299
Engineering, n.e.c.	1,115	1,201	1,189	1,274	1,291	1,544	1,619	1,594	1,648
Sciences, total	32,761	33,940	36,921	38,108	41,782	45,604	48,213	51,207	53,086
Physical sciences	6,271	6,485	7,232	7,602	8,483	9,498	10,028	10,484	11,116
Astronomy	93	102	105	117	150	160	172	160	158
Chemistry	3,217	3,216	3,525	3,635	4,095	4,513	4,940	5,324	5,711
Physics	2,950	3,157	3,584	3,828	4,215	4,800	4,894	4,964	5,215
Physical sciences, n.e.c.	11	10	18	22	23	25	22	36	32
Earth, atmospheric, and ocean sciences	1,504	1,647	1,691	1,595	1,691	1,891	1,968	2,180	2,311
Atmospheric sciences	179	187	182	164	196	206	219	231	234
Geosciences	885	913	923	899	945	1,019	1,101	1,195	1,271
Oceanography	246	340	377	297	312	390	356	437	514
Earth, atm. & oc. sci., n.e.c.	194	207	209	235	238	276	292	317	292
Mathematical sciences	3,641	3,888	4,242	4,538	4,824	5,145	5,494	5,777	5,939
Computer sciences	2,558	3,190	3,963	4,535	5,550	6,134	6,485	6,820	7,030
Agricultural sciences	2,375	2,383	2,468	2,421	2,338	2,544	2,617	2,610	2,548
Biological sciences	4,855	5,039	5,533	5,820	6,372	7,235	8,091	9,083	10,039
Anatomy	86	88	74	58	91	121	153	180	221
Biochemistry	594	658	775	847	976	1,098	1,209	1,316	1,489
Biology	883	851	961	1,103	1,094	1,252	1,374	1,529	1,718
Biometry/epidemiology	160	150	157	123	173	223	263	300	303
Biophysics	61	70	80	80	93	120	125	179	208
Botany	539	595	612	619	627	757	777	897	868
Cell biology	82	103	128	147	189	275	333	402	471
Ecology	73	80	78	87	100	100	110	123	134
Entomology/parasitology	263	227	240	224	234	252	295	286	291
Genetics	92	114	145	134	166	205	244	264	300
Microbiology	418	435	512	545	653	725	818	959	1,053
Nutrition	834	841	821	891	925	905	967	974	998
Pathology	184	174	206	169	189	204	251	250	292
Pharmacology	199	243	245	256	264	333	396	459	515
Physiology	180	188	212	255	265	318	350	447	540
Zoology	133	131	142	144	178	188	223	261	269
Biosciences, n.e.c.	74	91	145	138	155	159	203	257	369
Psychology	1,004	1,079	1,094	1,045	1,161	1,170	1,214	1,330	1,347
Social sciences	10,553	10,229	10,698	10,552	11,363	11,987	12,316	12,923	12,756
Agricultural economics	770	702	765	764	768	759	737	870	874
Anthropology	428	386	402	386	445	536	582	651	641
Economics (except agricultural)	3,674	3,554	3,548	3,575	4,000	4,103	4,257	4,495	4,487
Geography	370	391	386	372	360	384	425	407	427
History and philosophy of science	30	35	40	42	51	39	41	45	43
Linguistics	753	710	850	538	943	961	952	994	1,012
Political science	2,509	2,519	2,744	2,565	2,612	2,962	2,921	2,986	2,722
Sociology	1,044	985	1,101	1,069	1,205	1,243	1,335	1,423	1,376
Sociology/anthropology	101	134	129	122	128	124	126	124	134
Social sciences, n.e.c.	874	813	733	819	851	876	940	928	1,040
Total, health fields	2,154	2,310	2,423	2,347	2,543	2,701	2,771	3,093	3,282
Dentistry	173	129	122	130	155	179	145	156	170
Neurology	15	14	27	29	34	48	69	101	101
Nursing	225	202	159	172	166	160	163	183	170
Pharmaceutical sciences	539	587	619	630	633	681	676	797	892
Preventive medicine/community health	580	695	718	662	799	810	824	872	873
Speech pathology/audiology	224	213	257	212	223	251	231	270	276
Veterinary sciences	118	93	111	110	133	138	153	161	189
Clinical medicine, n.e.c.	116	150	168	118	189	197	213	235	248
Health related, n.e.c.	164	227	242	284	211	237	297	318	363

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-42. Part-time science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	134,433	138,838	140,313	142,581	148,475	150,934	151,924	151,664	154,364
Total, science/engineering fields	114,971	117,947	118,977	119,845	125,129	126,079	126,942	125,580	127,032
Engineering, total	34,222	34,355	37,625	38,120	40,675	42,367	42,488	40,338	40,342
Aerospace	400	419	568	591	664	770	749	785	787
Agricultural	130	136	203	181	174	173	139	160	180
Biomedical	190	185	213	224	244	255	297	300	308
Chemical	1,507	1,581	1,694	1,639	1,604	1,418	1,437	1,259	1,146
Civil	5,307	4,755	5,123	5,118	5,163	5,009	5,073	4,879	4,905
Electrical	9,743	10,484	12,010	12,449	13,376	13,686	14,299	14,307	14,947
Engineering science	745	853	905	881	834	917	973	974	818
Industrial	6,384	6,039	6,287	6,382	7,574	8,271	8,489	7,534	6,977
Mechanical	4,196	4,200	4,581	5,157	5,282	5,939	6,129	5,795	5,790
Metallurgical/materials	671	646	743	785	850	823	912	851	859
Mining	73	76	96	78	98	70	78	74	94
Nuclear	251	259	151	216	190	206	235	198	211
Petroleum	128	110	117	130	205	175	174	143	159
Engineering, n.e.c.	4,497	4,612	4,934	4,289	4,417	4,655	3,504	3,079	3,161
Sciences, total	80,749	83,592	81,352	81,725	84,454	83,712	84,454	85,242	86,690
Physical sciences	4,074	4,159	4,261	4,212	4,326	4,496	4,324	4,398	4,420
Astronomy	32	42	33	43	36	35	41	26	27
Chemistry	2,628	2,728	2,778	2,633	2,729	2,748	2,589	2,490	2,545
Physics	1,213	1,234	1,316	1,371	1,390	1,486	1,506	1,674	1,620
Physical sciences, n.e.c.	201	155	134	165	171	227	188	208	228
Earth, atmospheric, and ocean sciences	3,384	3,738	3,495	3,793	4,106	3,840	3,979	3,736	3,724
Atmospheric sciences	137	110	111	131	92	106	128	111	102
Geosciences	1,779	2,100	2,118	2,277	2,591	2,435	2,332	2,181	2,104
Oceanography	460	498	451	503	519	434	476	404	408
Earth, atm. & oc. sci., n.e.c.	1,008	1,030	815	882	904	865	1,043	1,040	1,110
Mathematical sciences	5,761	6,376	6,433	6,159	5,780	5,592	5,534	5,639	5,681
Computer sciences	8,992	10,641	12,929	14,223	15,743	16,115	16,565	17,191	16,888
Agricultural sciences	2,024	2,423	2,454	2,312	2,283	2,100	2,021	2,014	2,094
Biological sciences	9,397	9,321	8,943	8,691	9,176	9,038	8,625	8,509	8,650
Anatomy	109	137	116	93	102	80	87	83	79
Biochemistry	293	274	227	227	203	245	209	190	257
Biology	4,724	4,353	4,061	3,934	4,201	4,130	3,823	3,719	3,629
Biometry/epidemiology	183	247	279	253	364	386	382	455	499
Biophysics	6	17	13	14	60	98	123	48	45
Botany	442	475	407	411	499	407	428	398	413
Cell biology	29	33	44	47	23	61	78	55	62
Ecology	162	141	163	211	152	155	167	192	230
Entomology/parasitology	212	200	170	174	204	199	182	179	172
Genetics	64	66	71	73	63	91	106	102	82
Microbiology	562	613	558	500	568	503	438	465	499
Nutrition	1,167	1,239	1,363	1,259	1,274	1,266	1,274	1,361	1,396
Pathology	391	439	394	385	319	328	307	274	283
Pharmacology	110	144	136	124	117	123	150	140	135
Physiology	220	253	228	191	225	215	217	212	149
Zoology	377	367	378	440	417	363	326	315	315
Biosciences, n.e.c.	346	323	335	355	385	388	328	321	405
Psychology	13,966	14,280	14,338	14,966	15,539	15,030	15,359	15,865	16,027
Social sciences	33,151	32,654	28,499	27,369	27,501	27,501	28,047	27,890	29,206
Agricultural economics	224	289	248	252	278	284	346	350	364
Anthropology	1,795	1,843	1,704	1,622	1,715	1,744	1,727	1,669	1,742
Economics (except agricultural)	3,957	4,256	3,947	3,775	3,527	3,181	3,106	3,080	3,096
Geography	954	1,027	858	860	812	947	933	993	1,153
History and philosophy of science	31	33	24	31	45	29	27	22	31
Linguistics	874	646	647	841	718	751	833	735	887
Political science	16,620	16,194	14,607	13,123	13,841	13,857	14,618	14,499	15,166
Sociology	2,415	2,371	2,126	1,995	1,923	1,909	1,919	1,974	2,081
Sociology/anthropology	535	476	529	469	469	437	422	425	389
Social sciences, n.e.c.	5,746	5,519	3,809	4,401	4,173	4,362	4,116	4,143	4,297
Total, health fields	19,462	20,891	21,336	22,736	23,346	24,855	24,982	26,084	27,332
Dentistry	181	109	75	82	90	113	148	155	149
Neurology	2	2	3	4	2	10	19	10	22
Nursing	8,566	9,642	10,741	11,874	11,917	12,546	12,555	12,963	13,895
Pharmaceutical sciences	861	816	873	748	761	840	783	706	756
Preventive medicine/community health	2,753	2,760	2,718	2,886	3,155	3,147	3,398	3,454	3,538
Speech pathology/audiology	3,202	3,239	2,585	2,485	2,540	2,564	2,412	2,453	2,420
Veterinary sciences	10[illegible]	93	103	132	122	124	139	146	133
Clinical medicine, n.e.c.	596	664	554	532	567	552	571	578	449
Health related, n.e.c.	3,192	3,566	3,684	3,993	4,192	4,959	4,957	5,619	5,970

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-43. Part-time science/engineering graduate students in all institutions by geographic distribution: 1981-89

Division and State	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all institutions	134,433	138,838	140,313	142,581	148,475	150,934	151,924	151,664	154,364
New England	10,193	11,040	11,535	9,701	10,088	9,777	9,808	11,526	10,878
Connecticut	2,601	3,065	3,172	2,676	2,740	2,689	2,770	3,059	3,127
Maine	82	55	97	118	118	117	169	145	162
Massachusetts	6,642	7,113	7,389	6,206	6,453	6,148	6,105	7,277	6,585
New Hampshire	158	165	190	110	131	135	119	274	331
Rhode Island	543	422	479	356	449	469	449	567	516
Vermont	167	220	208	235	197	219	196	204	157
Middle Atlantic	33,963	34,228	35,749	32,137	32,533	32,468	31,360	35,111	35,010
New Jersey	6,116	5,944	6,137	6,242	6,240	5,891	5,779	6,320	5,838
New York	20,168	20,657	21,948	19,354	19,650	19,657	18,865	20,909	21,351
Pennsylvania	7,679	7,627	7,664	6,541	6,643	6,920	6,716	7,882	7,821
East North Central	19,017	19,766	20,512	19,565	19,375	20,484	20,830	22,608	23,439
Illinois	6,572	6,451	6,370	5,994	6,312	6,111	6,360	7,112	7,558
Indiana	2,235	2,378	2,565	1,703	1,276	1,770	1,749	1,897	1,987
Michigan	3,331	3,712	3,955	4,257	4,317	4,783	4,828	4,837	5,235
Ohio	4,907	5,185	5,392	5,804	5,681	5,987	5,999	6,402	6,164
Wisconsin	1,972	2,040	2,230	1,807	1,789	1,833	1,894	2,360	2,495
West North Central	6,216	6,606	6,869	6,163	7,154	7,278	7,418	8,611	9,355
Iowa	875	884	898	859	874	957	958	1,031	1,005
Kansas	1,250	1,132	1,323	1,271	1,852	1,820	1,954	2,047	2,257
Minnesota	1,043	1,151	1,275	822	1,041	909	813	1,512	1,690
Missouri	2,002	2,327	2,243	2,153	2,250	2,419	2,514	2,741	3,018
Nebraska	731	703	757	693	730	783	778	871	924
North Dakota	156	176	167	180	181	159	128	144	165
South Dakota	159	233	206	185	226	231	273	265	296
South Atlantic	21,791	22,059	19,608	20,116	21,249	22,311	23,721	24,731	24,874
Delaware	409	439	404	413	388	389	446	354	356
District of Columbia	5,741	5,049	4,797	5,224	5,211	5,762	5,818	5,145	4,857
Florida	4,482	4,726	3,365	3,072	3,630	3,597	4,588	5,267	4,989
Georgia	1,515	1,580	1,398	1,485	1,516	1,600	1,822	2,082	2,269
Maryland	3,468	3,462	3,671	3,782	3,690	3,730	3,687	4,187	4,378
North Carolina	1,433	1,558	1,756	1,728	1,738	1,840	1,877	1,869	2,025
South Carolina	944	1,056	910	934	882	1,019	1,084	1,028	1,110
Virginia	2,173	2,310	2,356	2,622	3,372	3,572	3,553	3,818	3,976
West Virginia	1,626	1,879	951	856	822	802	846	981	914
East South Central	4,683	4,824	4,963	4,629	4,774	4,964	5,022	6,257	6,646
Alabama	1,129	1,127	1,110	1,120	1,245	1,293	1,463	1,712	1,839
Kentucky	1,142	1,193	1,131	871	861	889	980	1,575	1,653
Mississippi	505	558	548	712	727	683	634	725	746
Tennessee	1,907	1,941	2,174	1,926	1,941	2,099	1,945	2,245	2,408
West South Central	11,181	12,010	13,105	10,874	11,600	11,564	11,502	13,406	14,384
Arkansas	530	571	632	357	398	375	465	821	657
Louisiana	1,273	1,306	1,485	1,243	1,171	1,054	907	1,030	1,141
Oklahoma	886	880	1,002	946	1,442	1,455	1,819	1,798	1,995
Texas	8,492	9,253	9,986	8,328	8,589	8,680	8,311	9,757	10,591
Mountain	5,622	6,147	5,659	5,777	6,572	6,705	6,830	7,054	7,453
Arizona	1,698	2,208	1,867	1,884	2,175	1,950	2,072	1,974	2,066
Colorado	1,636	1,675	1,422	1,350	1,467	1,851	1,744	1,907	2,199
Idaho	292	282	351	409	480	452	512	568	686
Montana	62	83	80	91	133	121	138	151	171
Nevada	236	152	165	129	119	111	133	362	373
New Mexico	838	794	828	759	781	784	827	904	874
Utah	795	852	905	1,032	1,126	1,170	1,223	1,030	912
Wyoming	65	101	41	123	291	266	181	158	172
Pacific	21,181	21,493	21,529	18,828	20,206	20,359	20,323	21,596	21,556
Alaska	261	243	230	7	169	97	164	270	190
California	18,403	18,736	18,708	16,739	18,045	18,323	18,062	18,753	18,869
Hawaii	262	280	280	242	238	250	295	307	318
Oregon	608	621	656	601	557	565	624	700	753
Washington	1,647	1,613	1,655	1,239	1,197	1,124	1,178	1,566	1,426
Outlying Areas	586	665	784	730	775	787	785	764	769
State, Unknown 2/	0	0	0	14,061	14,149	14,237	14,325	0	0

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

2/ These numbers represent the total of all nonsampled master's-granting institutions.

SOURCE: National Science Foundation, SRS

Table B-44. Male part-time science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	82,973	83,891	83,964	84,617	88,199	89,036	89,291	86,996	87,484
Total, science/engineering fields	78,841	79,678	80,012	80,587	83,927	84,453	84,640	82,448	82,868
Engineering, total	31,077	30,794	33,398	33,768	35,756	36,838	36,756	34,729	34,790
Aerospace	384	382	523	543	622	716	690	721	722
Agricultural	129	129	188	166	154	150	128	146	162
Biomedical	160	146	170	180	198	207	246	236	229
Chemical	1,262	1,352	1,447	1,399	1,354	1,167	1,157	976	918
Civil	4,856	4,244	4,556	4,526	4,506	4,348	4,362	4,147	4,123
Electrical	9,178	9,751	10,909	11,401	12,166	12,253	12,765	12,726	13,256
Engineering science	650	710	750	734	712	772	811	832	709
Industrial	5,520	5,157	5,330	5,276	6,280	6,759	6,895	6,053	5,669
Mechanical	3,912	3,914	4,259	4,762	4,830	5,405	5,565	5,210	5,237
Metallurgical/materials	568	534	619	671	686	671	759	682	693
Mining	71	71	90	75	96	69	73	68	88
Nuclear	239	246	141	198	174	182	211	172	189
Petroleum	110	101	108	122	186	165	163	125	151
Engineering, n.e.c.	4,038	4,057	4,308	3,715	3,792	3,974	2,931	2,635	2,644
Sciences, total	47,764	48,884	46,614	46,819	48,171	47,615	47,884	47,719	48,078
Physical sciences	3,059	3,135	3,215	3,149	3,242	3,372	3,236	3,265	3,291
Astronomy	24	35	26	40	32	30	36	22	23
Chemistry	1,836	1,918	1,945	1,817	1,926	1,923	1,799	1,679	1,749
Physics	1,074	1,094	1,151	1,186	1,177	1,272	1,276	1,442	1,367
Physical sciences, n.e.c.	125	88	93	106	107	147	125	122	152
Earth, atmospheric, and ocean sciences	2,516	2,785	2,555	2,765	2,997	2,793	2,882	2,658	2,583
Atmospheric sciences	121	101	99	114	74	88	108	95	86
Geosciences	1,352	1,585	1,559	1,714	1,968	1,853	1,760	1,602	1,559
Oceanography	330	365	335	351	357	292	334	284	262
Earth, atm. & oc. sci., n.e.c.	713	734	562	586	598	560	680	677	676
Mathematical sciences	3,806	4,080	4,140	3,963	3,612	3,503	3,457	3,549	3,584
Computer sciences	6,510	7,506	8,930	10,080	11,336	11,702	11,988	12,367	12,185
Agricultural sciences	1,635	1,883	1,835	1,747	1,688	1,531	1,430	1,388	1,458
Biological sciences	4,820	4,681	4,361	4,257	4,453	4,355	4,272	3,982	3,974
Anatomy	66	89	74	50	60	46	45	49	40
Biochemistry	179	154	123	136	117	147	115	89	158
Biology	2,612	2,353	2,116	2,018	2,160	2,112	2,041	1,902	1,813
Biometry/epidemiology	84	108	123	119	182	181	189	198	184
Biophysics	4	14	10	12	44	73	95	37	29
Botany	274	302	250	265	299	265	271	249	267
Cell biology	17	22	26	33	16	35	44	32	35
Ecology	94	87	109	155	100	86	86	99	125
Entomology/parasitology	164	137	121	124	139	140	130	129	124
Genetics	19	20	25	30	30	47	53	50	36
Microbiology	279	307	261	233	266	243	212	216	230
Nutrition	176	215	266	247	230	200	252	241	261
Pathology	197	230	215	202	153	181	155	137	127
Pharmacology	62	90	85	75	68	73	93	96	84
Physiology	154	165	145	117	130	119	125	111	79
Zoology	231	213	239	270	260	219	200	202	206
Biosciences, n.e.c.	208	175	173	171	199	188	166	145	176
Psychology	5,836	5,698	5,282	5,460	5,422	5,127	5,242	5,314	5,230
Social sciences	19,582	19,116	16,296	15,398	15,421	15,232	15,377	15,196	15,773
Agricultural economics	191	223	186	181	207	210	267	264	275
Anthropology	805	774	710	636	721	665	651	643	680
Economics (except agricultural)	2,822	3,008	2,867	2,737	2,513	2,223	2,165	2,138	2,126
Geography	658	693	560	554	555	619	584	668	752
History and philosophy of science	17	18	16	21	25	19	14	15	20
Linguistics	342	234	192	287	217	236	272	236	269
Political science	9,805	9,504	8,472	7,618	7,927	7,893	8,213	7,981	8,378
Sociology	1,078	1,045	925	842	817	824	785	857	878
Sociology/anthropology	264	225	269	220	225	208	194	174	157
Social sciences, n.e.c.	3,600	3,392	2,099	2,302	2,214	2,335	2,232	2,220	2,238
Total, health fields	4,132	4,213	3,952	4,030	4,272	4,583	4,651	4,548	4,616
Dentistry	105	88	55	55	64	88	105	106	93
Neurology	1	2	3	3	2	5	12	1	13
Nursing	372	343	389	429	485	487	576	552	628
Pharmaceutical sciences	616	559	566	458	465	527	456	393	418
Preventive medicine/community health	1,255	1,145	1,030	1,119	1,236	1,231	1,420	1,338	1,218
Speech pathology/audiology	358	401	283	340	318	317	228	260	213
Veterinary sciences	63	58	63	81	71	67	79	73	70
Clinical medicine, n.e.c.	251	305	228	203	197	213	208	181	156
Health related, n.e.c.	1,111	1,312	1,335	1,342	1,434	1,648	1,567	1,644	1,807

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-45. Female part-time science/engineering graduate students in all institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	51,460	54,947	56,349	57,964	60,276	61,898	62,633	64,668	66,880
Total, science/engineering fields	36,130	38,269	38,965	39,258	41,202	41,626	42,302	43,132	44,164
Engineering, total	3,145	3,561	4,227	4,352	4,919	5,529	5,732	5,609	5,552
Aerospace	16	37	45	48	42	54	59	64	65
Agricultural	1	7	15	15	20	23	11	14	18
Biomedical	30	39	43	44	46	48	51	64	79
Chemical	245	229	247	240	250	251	280	283	228
Civil	451	511	567	592	657	661	711	732	782
Electrical	565	733	1,101	1,048	1,210	1,433	1,534	1,581	1,691
Engineering science	95	143	155	147	122	145	162	142	109
Industrial	864	882	957	1,106	1,294	1,512	1,594	1,481	1,308
Mechanical	284	286	322	395	452	534	564	585	553
Metallurgical/materials	103	112	124	114	164	152	153	169	166
Mining	2	5	6	3	2	1	5	6	6
Nuclear	12	13	10	18	16	24	24	26	22
Petroleum	18	9	9	8	19	10	11	18	8
Engineering, n.e.c.	459	555	626	574	625	681	573	444	517
Sciences, total	32,985	34,708	34,738	34,906	36,283	36,097	36,570	37,523	38,612
Physical sciences	1,015	1,024	1,046	1,063	1,084	1,124	1,088	1,133	1,129
Astronomy	8	7	7	3	4	5	5	4	4
Chemistry	792	810	833	816	803	825	790	811	796
Physics	139	140	165	185	213	214	230	232	253
Physical sciences, n.e.c.	76	67	41	59	64	80	63	86	76
Earth, atmospheric, and ocean sciences	868	953	940	1,028	1,109	1,047	1,097	1,078	1,141
Atmospheric sciences	16	9	12	17	18	18	20	16	16
Geosciences	427	515	559	563	623	582	572	579	545
Oceanography	130	133	116	152	162	142	142	120	146
Earth, atm. & oc. sci., n.e.c.	295	296	253	296	306	305	363	363	434
Mathematical sciences	1,955	2,296	2,293	2,196	2,168	2,089	2,077	2,090	2,097
Computer sciences	2,482	3,135	3,999	4,143	4,407	4,413	4,577	4,824	4,703
Agricultural sciences	389	540	619	565	595	569	591	626	636
Biological sciences	4,577	4,640	4,582	4,434	4,723	4,683	4,353	4,527	4,676
Anatomy	43	48	42	43	42	34	42	34	39
Biochemistry	114	120	104	91	86	98	94	101	99
Biology	2,112	2,000	1,945	1,916	2,041	2,018	1,782	1,817	1,816
Biometry/epidemiology	99	139	156	134	182	205	193	257	315
Biophysics	2	3	3	2	16	25	28	11	16
Botany	168	173	157	146	200	142	157	149	146
Cell biology	12	11	18	14	7	26	34	23	27
Ecology	68	54	54	56	52	69	81	93	105
Entomology/parasitology	48	63	49	50	65	59	52	50	48
Genetics	45	46	46	43	33	44	53	52	46
Microbiology	283	306	297	267	302	260	226	249	269
Nutrition	991	1,024	1,097	1,012	1,044	1,066	1,022	1,120	1,135
Pathology	194	209	179	183	166	147	152	137	156
Pharmacology	48	54	51	49	49	50	57	44	51
Physiology	66	88	83	74	95	96	92	101	70
Zoology	146	154	139	170	157	144	126	113	109
Biosciences, n.e.c.	138	148	162	184	186	200	162	176	229
Psychology	8,130	8,582	9,056	9,506	10,117	9,903	10,117	10,551	10,797
Social sciences	13,569	13,538	12,203	11,971	12,080	12,269	12,670	12,694	13,433
Agricultural economics	33	66	62	71	71	74	79	86	89
Anthropology	990	1,069	994	986	994	1,079	1,076	1,026	1,062
Economics (except agricultural)	1,135	1,248	1,080	1,038	1,014	958	941	942	970
Geography	296	334	298	306	257	328	349	325	401
History and philosophy of science	14	15	8	10	20	10	13	7	11
Linguistics	532	412	455	554	501	515	561	499	618
Political science	6,815	6,690	6,135	5,505	5,914	5,964	6,405	6,518	6,788
Sociology	1,337	1,326	1,201	1,153	1,106	1,085	1,134	1,117	1,203
Sociology/anthropology	271	251	260	249	244	229	228	251	232
Social sciences, n.e.c.	2,146	2,127	1,710	2,099	1,959	2,027	1,884	1,923	2,059
Total, health fields	15,330	16,678	17,384	18,706	19,074	20,272	20,331	21,536	22,716
Dentistry	76	21	20	27	26	25	43	49	56
Neurology	1	0	0	1	0	5	7	9	9
Nursing	8,194	9,299	10,352	11,445	11,432	12,059	11,979	12,411	13,267
Pharmaceutical sciences	245	257	307	290	296	313	327	313	338
Preventive medicine/community health	1,498	1,615	1,688	1,767	1,919	1,916	1,978	2,116	2,320
Speech pathology/audiology	2,844	2,838	2,302	2,145	2,222	2,247	2,184	2,193	2,207
Veterinary sciences	46	35	40	51	51	57	60	73	63
Clinical medicine, n.e.c.	345	359	326	329	370	339	363	397	293
Health related, n.e.c.	2,081	2,254	2,349	2,651	2,758	3,311	3,390	3,975	4,163

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-46. Part-time science/engineering graduate students in public institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	78,666	83,947	85,341	87,402	91,620	94,563	95,540	96,299	101,361
Total, science/engineering fields	65,895	69,949	71,268	72,539	76,344	77,764	78,295	78,365	82,400
Engineering, total	16,962	18,238	19,880	20,124	22,040	23,132	24,204	23,224	24,456
Aerospace	269	241	370	434	470	523	525	503	513
Agricultural	130	135	203	181	174	173	139	160	180
Biomedical	91	100	122	120	111	143	146	170	207
Chemical	876	987	1,092	1,050	1,060	901	859	830	781
Civil	3,144	2,859	3,134	3,278	3,417	3,316	3,649	3,433	3,631
Electrical	4,079	4,813	5,108	5,353	6,390	6,633	7,451	7,210	7,596
Engineering science	499	528	588	582	534	625	654	659	737
Industrial	1,818	2,015	2,214	2,405	3,004	3,251	3,273	3,352	3,767
Mechanical	2,289	2,333	2,619	2,907	3,104	3,585	3,741	3,480	3,450
Metallurgical/materials	298	302	352	415	448	448	467	450	440
Mining	70	68	89	73	93	65	74	70	89
Nuclear	184	203	141	215	189	205	234	192	201
Petroleum	37	36	29	46	137	138	116	113	113
Engineering, n.e.c.	3,178	3,618	3,819	3,065	2,909	3,126	2,876	2,602	2,751
Sciences, total	48,933	51,711	51,388	52,415	54,304	54,632	54,091	55,141	57,944
Physical sciences	2,628	2,791	2,821	2,892	3,051	3,106	3,072	3,183	3,233
Astronomy	31	38	31	39	32	31	37	25	22
Chemistry	1,551	1,709	1,775	1,710	1,825	1,798	1,752	1,685	1,731
Physics	845	889	881	978	1,024	1,072	1,123	1,283	1,272
Physical sciences, n.e.c.	201	155	134	165	170	205	160	190	208
Earth, atmospheric, and ocean sciences	2,906	3,265	3,066	3,313	3,631	3,445	3,495	3,298	3,257
Atmospheric sciences	126	103	100	106	87	83	86	72	84
Geosciences	1,554	1,886	1,882	2,049	2,370	2,261	2,160	2,023	1,919
Oceanography	444	461	411	435	450	408	414	349	345
Earth, atm. & oc. sci., n.e.c.	782	815	673	723	724	693	835	854	909
Mathematical sciences	3,559	4,086	4,175	4,064	4,002	4,104	4,030	4,196	4,294
Computer sciences	4,535	5,500	6,661	7,046	7,603	7,815	7,792	8,146	8,486
Agricultural sciences	2,011	2,403	2,436	2,294	2,241	2,080	1,987	1,977	2,078
Biological sciences	6,588	6,620	6,602	6,421	6,966	6,823	6,513	6,556	6,682
Anatomy	74	81	73	73	70	56	55	56	59
Biochemistry	136	159	147	125	120	173	134	133	183
Biology	3,206	2,890	2,875	2,816	3,087	3,016	2,848	2,928	2,850
Biometry/epidemiology	92	147	173	163	191	250	218	280	292
Biophysics	6	17	12	11	56	97	118	46	43
Botany	408	450	377	385	481	392	409	381	387
Cell biology	19	16	29	29	16	47	61	52	62
Ecology	123	116	141	189	130	133	139	136	174
Entomology/parasitology	210	199	169	173	203	199	182	178	171
Genetics	28	29	28	19	27	30	42	53	44
Microbiology	380	462	432	358	447	388	331	366	404
Nutrition	930	960	1,057	967	967	976	1,018	1,085	1,106
Pathology	205	245	236	233	238	208	183	141	162
Pharmacology	57	97	98	86	80	88	99	100	105
Physiology	165	195	154	142	174	161	169	155	116
Zoology	333	330	348	396	389	339	299	290	307
Biosciences, n.e.c.	216	227	253	256	290	270	208	176	223
Psychology	7,389	7,735	7,767	8,014	8,526	8,322	8,349	8,579	9,047
Social sciences	19,317	19,311	17,860	18,371	18,284	18,937	18,853	19,206	20,[illegible]
Agricultural economics	222	285	246	250	276	283	345	350	364
Anthropology	1,339	1,409	1,324	1,277	1,332	1,392	1,364	1,333	1,430
Economics (except agricultural)	2,110	2,245	2,100	2,147	2,032	2,087	1,935	1,989	1,973
Geography	921	992	831	833	786	926	902	966	1,133
History and philosophy of science	19	26	20	27	27	22	19	19	26
Linguistics	530	457	458	517	496	543	589	563	675
Political science	9,455	9,226	8,248	8,462	8,789	9,092	9,069	9,383	10,229
Sociology	1,688	1,713	1,542	1,441	1,436	1,455	1,470	1,571	1,689
Sociology/anthropology	226	195	198	189	186	194	193	242	242
Social sciences, n.e.c.	2,807	2,763	2,893	3,228	2,924	2,943	2,967	2,790	3,106
Health fields	12,771	13,998	14,073	14,863	15,276	16,799	17,245	17,934	18,961
Dentistry	98	77	41	43	48	84	105	112	95
Neurology	2	2	3	3	2	3	2	3	14
Nursing	5,930	6,671	7,502	8,260	8,161	9,100	9,149	9,599	10,183
Pharmaceutical sciences	251	266	266	276	331	348	348	361	401
Preventive medicine/community health	1,411	1,401	1,380	1,385	1,513	1,578	1,881	1,908	2,051
Speech pathology/audiology	2,805	2,899	2,157	2,046	2,012	2,100	1,906	1,940	1,885
Veterinary sciences	108	90	103	129	119	121	136	146	133
Clinical medicine, n.e.c.	364	432	380	363	420	394	421	416	328
Health related, n.e.c.	1,802	2,160	2,241	2,358	2,670	3,071	3,297	3,449	3,871

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-47. Part-time science/engineering graduate students in private institutions by field: 1981-89

Field	1981	1982	1983	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	55,767	54,891	54,972	55,179	56,855	56,371	56,384	55,365	53,003
Total, science/engineering fields	49,076	47,998	47,709	47,306	48,785	48,315	48,647	47,215	44,632
Engineering, total	17,260	16,117	17,745	17,996	18,635	19,235	18,284	17,114	15,886
Aerospace	131	178	198	157	194	247	224	282	274
Agricultural	0	1	0	0	0	0	0	0	0
Biomedical	99	85	91	104	133	112	151	130	101
Chemical	631	594	602	589	544	517	578	429	365
Civil	2,163	1,896	1,989	1,840	1,746	1,693	1,424	1,446	1,274
Electrical	5,664	5,671	6,902	7,096	6,986	7,053	6,848	7,097	7,351
Engineering science	246	325	317	299	300	292	319	315	81
Industrial	4,566	4,024	4,073	3,977	4,570	5,020	5,216	4,182	3,210
Mechanical	1,907	1,867	1,962	2,250	2,178	2,354	2,388	2,315	2,340
Metallurgical/materials	373	344	391	370	402	375	445	401	419
Mining	3	8	7	5	5	5	4	4	5
Nuclear	67	56	10	1	1	1	1	6	10
Petroleum	91	74	88	84	68	37	58	30	46
Engineering, n.e.c.	1,319	994	1,115	1,224	1,508	1,529	628	477	410
Sciences, total	31,816	31,881	29,964	29,310	30,150	29,080	30,363	30,101	28,746
Physical sciences	1,446	1,368	1,440	1,320	1,275	1,390	1,252	1,215	1,187
Astronomy	1	4	2	4	4	4	4	1	5
Chemistry	1,077	1,019	1,003	923	904	950	837	805	814
Physics	368	345	435	393	366	414	383	391	348
Physical sciences, n.e.c.	0	0	0	0	1	22	28	18	20
Earth, atmospheric, and ocean sciences	478	473	429	480	475	395	484	438	467
Atmospheric sciences	11	7	11	25	5	23	42	39	18
Geosciences	225	214	236	228	221	174	172	158	185
Oceanography	16	37	40	68	69	26	62	55	63
Earth, atm. & oc. sci., n.e.c.	226	215	142	159	180	172	208	186	201
Mathematical sciences	2,202	2,290	2,258	2,095	1,778	1,488	1,504	1,443	1,387
Computer sciences	4,457	5,141	6,268	7,177	8,140	8,300	8,773	9,045	8,402
Agricultural sciences	13	20	18	18	42	20	34	37	16
Biological sciences	2,809	2,701	2,341	2,270	2,210	2,215	2,112	1,953	1,968
Anatomy	35	56	43	20	32	24	32	27	20
Biochemistry	157	115	80	102	83	72	75	57	74
Biology	1,518	1,463	1,186	1,118	1,114	1,114	975	791	779
Biometry/epidemiology	91	100	106	90	173	136	164	175	207
Biophysics	0	0	1	3	4	1	5	2	2
Botany	34	25	30	26	18	15	19	17	26
Cell biology	10	17	15	18	7	14	17	3	0
Ecology	39	25	22	22	22	22	28	56	56
Entomology/parasitology	2	1	1	1	1	0	0	1	1
Genetics	36	37	43	54	36	61	64	49	38
Microbiology	182	151	126	142	121	115	107	99	95
Nutrition	237	279	306	292	307	290	256	276	290
Pathology	186	194	158	152	81	120	124	133	121
Pharmacology	53	47	38	38	37	35	51	40	30
Physiology	55	58	74	49	51	54	48	57	33
Zoology	44	37	30	44	28	24	27	25	14
Biosciences, n.e.c.	130	96	82	99	95	118	120	145	182
Psychology	6,577	6,545	6,571	6,952	7,013	6,708	7,010	7,286	6,980
Social sciences	13,834	13,343	10,639	8,998	9,217	8,564	9,194	8,684	8,339
Agricultural economics	2	4	2	2	2	1	1	0	0
Anthropology	456	434	380	345	383	352	363	336	312
Economics (except agricultural)	1,847	2,011	1,847	1,628	1,495	1,094	1,171	1,091	1,123
Geography	33	35	27	27	26	21	31	27	20
History and philosophy of science	12	7	4	4	18	7	8	3	5
Linguistics	344	189	189	324	222	208	244	172	212
Political science	7,165	6,968	6,359	4,661	5,052	4,765	5,549	5,116	4,937
Sociology	727	658	584	554	487	454	449	403	392
Sociology/anthropology	309	281	331	280	283	243	229	183	147
Social sciences, n.e.c.	2,939	2,756	916	1,173	1,249	1,419	1,149	1,353	1,191
Health fields	6,691	6,893	7,263	7,873	8,070	8,056	7,737	8,150	8,371
Dentistry	83	32	34	39	42	29	43	43	54
Neurology	0	0	0	1	0	7	17	7	8
Nursing	2,636	2,971	3,239	3,614	3,756	3,446	3,406	3,364	3,712
Pharmaceutical sciences	610	550	607	472	430	492	435	345	355
Preventive medicine/community health	1,342	1,359	1,338	1,501	1,642	1,569	1,517	1,546	1,487
Speech pathology/audiology	397	340	428	439	528	464	506	513	535
Veterinary sciences	1	3	0	3	3	3	3	0	0
Clinical medicine, n.e.c.	232	232	174	169	147	158	150	162	121
Health related, n.e.c.	1,390	1,406	1,443	1,635	1,522	1,888	1,660	2,170	2,099

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

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Table B-48. Part-time science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1981-89

Field, citizenship, and racial/ethnic background	1981 1/	1982 1/	1983	1984 2/	1985 2/	1986 2/	1987 2/	1988	1989
Total, all surveyed fields:	134,433	138,838	140,313	142,581	148,475	150,934	151,924	151,664	154,364
Total U.S. citizens	-	-	128,884	130,909	136,779	138,742	138,571	137,844	139,140
Black, non-Hispanic	4,497	5,671	6,312	6,146	6,106	6,107	6,052	6,447	6,451
American Indian/Alaskan Native	222	442	412	352	319	328	339	432	409
Asian/Pacific Islander	2,755	3,631	4,113	4,215	5,186	5,303	5,919	6,261	6,433
Hispanic	2,573	3,660	4,401	4,167	4,038	3,968	4,294	4,410	4,369
White, non-Hispanic	74,875	98,568	100,963	101,221	105,146	106,891	108,580	109,819	110,288
Other or unknown	-	-	12,683	14,808	15,984	16,145	13,387	10,475	11,190
Foreign	-	-	11,429	11,672	11,696	12,192	13,353	13,820	15,224
Sciences, total:	80,749	83,592	81,352	81,725	84,454	83,712	84,454	85,242	86,690
Total U.S. citizens	-	-	75,326	75,337	78,160	77,197	77,099	77,774	78,545
Black, non-Hispanic	3,340	4,168	4,414	4,188	4,232	4,209	4,136	4,425	4,431
American Indian/Alaskan Native	144	289	251	201	209	204	210	286	247
Asian/Pacific Islander	1,382	1,946	2,010	2,102	2,502	2,533	2,842	3,056	3,195
Hispanic	1,860	2,795	3,132	2,874	2,731	2,628	2,750	2,807	2,816
White, non-Hispanic	43,531	59,555	58,752	57,705	60,004	59,483	60,447	62,221	62,295
Other or unknown	-	-	6,767	8,267	8,482	8,140	6,714	4,979	5,561
Foreign	-	-	6,026	6,388	6,294	6,515	7,355	7,468	8,145
Physical sciences:	4,074	4,159	4,261	4,212	4,326	4,496	4,324	4,398	4,420
Total U.S. citizens	-	-	3,832	3,767	3,868	3,966	3,724	3,770	3,739
Black, non-Hispanic	107	135	163	159	156	133	130	127	124
American Indian/Alaskan Native	4	18	5	12	7	13	10	9	5
Asian/Pacific Islander	138	165	159	144	147	146	151	174	160
Hispanic	49	109	114	73	69	80	77	75	100
White, non-Hispanic	2,307	2,947	3,185	3,166	3,119	3,197	3,000	3,157	3,106
Other or unknown	-	-	206	213	370	397	356	228	244
Foreign	-	-	429	445	458	530	600	628	681
Earth, atmospheric, and ocean sciences:	3,384	3,738	3,495	3,793	4,106	3,840	3,979	3,736	3,724
Total U.S. citizens	-	-	3,321	3,584	3,903	3,635	3,724	3,473	3,445
Black, non-Hispanic	31	27	29	24	37	33	27	31	29
American Indian/Alaskan Native	5	5	3	5	4	4	4	6	6
Asian/Pacific Islander	25	72	84	43	38	28	38	37	46
Hispanic	24	59	81	70	57	60	45	44	42
White, non-Hispanic	2,069	3,005	3,002	3,217	3,378	3,196	3,336	3,145	3,135
Other or unknown	-	-	122	225	389	314	274	210	187
Foreign	-	-	174	209	203	205	255	263	279
Mathematical sciences:	5,761	6,376	6,433	6,159	5,780	5,592	5,534	5,639	5,681
Total U.S. citizens	-	-	5,720	5,504	5,253	4,926	4,897	4,986	4,995
Black, non-Hispanic	166	183	240	207	212	206	187	210	210
American Indian/Alaskan Native	2	22	20	19	16	23	27	16	14
Asian/Pacific Islander	139	194	227	261	212	239	267	287	287
Hispanic	68	116	126	116	97	105	75	110	84
White, non-Hispanic	3,261	4,587	4,708	4,401	4,162	3,671	3,767	3,897	3,828
Other or unknown	-	-	399	500	554	682	574	466	572
Foreign	-	-	713	655	527	666	637	653	686
Computer sciences:	8,992	10,641	12,929	14,223	15,743	16,115	16,565	17,191	16,888
Total U.S. citizens	-	-	11,344	12,399	13,835	14,243	14,322	14,941	14,250
Black, non-Hispanic	159	330	357	357	405	397	453	499	498
American Indian/Alaskan Native	2	16	11	11	11	10	12	28	25
Asian/Pacific Islander	374	525	541	706	1,118	1,194	1,401	1,550	1,625
Hispanic	81	144	177	177	351	284	383	355	347
White, non-Hispanic	3,826	7,235	8,429	8,638	9,563	9,839	10,514	11,241	10,269
Other or unknown	-	-	1,829	2,510	2,387	2,519	1,559	1,268	1,486
Foreign	-	-	1,585	1,824	1,908	1,872	2,243	2,250	2,638
Agricultural sciences:	2,024	2,423	2,454	2,312	2,283	2,100	2,021	2,014	2,094
Total U.S. citizens	-	-	2,230	2,097	2,025	1,905	1,768	1,755	1,829
Black, non-Hispanic	34	22	21	31	36	33	34	25	28
American Indian/Alaskan Native	4	13	12	7	7	7	13	12	6
Asian/Pacific Islander	25	21	20	13	26	16	14	25	25
Hispanic	34	46	41	50	53	49	36	41	42
White, non-Hispanic	1,381	1,948	1,977	1,856	1,738	1,674	1,575	1,603	1,665
Other or unknown	-	-	159	140	165	126	96	49	63
Foreign	-	-	224	215	258	195	253	259	265

See footnotes at end of table.

Table B-48. Part-time science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1981-89 -Continued

Field, citizenship, and racial/ethnic background	1981 1/	1982 1/	1983	1984 2/	1985 2/	1986 2/	1987 2/	1988	1989
Biological sciences:	9,397	9,321	8,943	8,691	9,176	9,038	8,625	8,509	8,650
Total U.S. citizens	-	-	8,390	8,122	8,592	8,385	7,923	7,782	7,856
Black, non-Hispanic	267	344	326	349	373	343	292	338	329
American Indian/Alaskan Native	7	25	31	13	15	18	14	27	16
Asian/Pacific Islander	157	225	245	194	214	235	242	245	260
Hispanic	129	192	192	173	179	204	207	220	239
White, non-Hispanic	5,894	7,082	6,983	6,890	7,182	6,893	6,491	6,592	6,583
Other or unknown	-	-	613	503	629	692	677	360	429
Foreign	-	-	553	569	584	653	702	727	794
Psychology:	13,966	14,280	14,338	14,966	15,539	15,030	15,359	15,865	16,027
Total U.S. citizens	-	-	13,998	14,622	15,203	14,696	15,032	15,534	15,732
Black, non-Hispanic	467	622	771	822	755	725	743	791	828
American Indian/Alaskan Native	45	61	43	34	47	36	41	58	53
Asian/Pacific Islander	78	122	164	161	178	174	173	172	181
Hispanic	276	439	680	755	605	568	569	610	510
White, non-Hispanic	7,496	11,123	11,320	11,507	12,256	12,088	12,486	13,086	13,194
Other or unknown	-	-	1,020	1,343	1,362	1,105	1,020	817	966
Foreign	-	-	340	344	336	334	327	331	295
Social sciences:	33,151	32,654	28,499	27,369	27,501	27,501	28,047	27,890	29,206
Total U.S. citizens	-	-	26,491	25,242	25,481	25,441	25,709	25,533	26,699
Black, non-Hispanic	2,109	2,505	2,507	2,239	2,258	2,339	2,270	2,404	2,385
American Indian/Alaskan Native	75	129	126	100	102	93	89	130	122
Asian/Pacific Islander	446	622	570	580	569	501	556	566	611
Hispanic	1,199	1,690	1,721	1,460	1,320	1,278	1,358	1,352	1,452
White, non-Hispanic	17,297	21,628	19,148	18,030	18,606	18,925	19,278	19,500	20,515
Other or unknown	-	-	2,419	2,833	2,626	2,305	2,158	1,581	1,614
Foreign	-	-	2,008	2,127	2,020	2,060	2,338	2,357	2,507
Engineering, total:	34,222	34,355	37,625	38,120	40,675	42,367	42,488	40,338	40,342
Total U.S. citizens	-	-	32,877	33,419	35,893	37,337	37,095	34,581	33,900
Black, non-Hispanic	455	625	748	775	718	741	718	703	697
American Indian/Alaskan Native	43	95	83	82	54	54	58	66	59
Asian/Pacific Islander	1,116	1,328	1,695	1,705	2,252	2,359	2,668	2,687	2,693
Hispanic	449	500	697	791	744	789	884	787	713
White, non-Hispanic	18,858	21,699	24,546	24,620	26,181	27,125	28,056	26,568	25,788
Other or unknown	-	-	5,108	5,446	5,944	6,269	4,711	3,770	3,950
Foreign	-	-	4,748	4,701	4,782	5,030	5,393	5,757	6,442
Chemical engineering:	1,507	1,581	1,694	1,639	1,604	1,418	1,437	1,259	1,146
Total U.S. citizens	-	-	1,418	1,410	1,392	1,228	1,272	1,115	966
Black, non-Hispanic	16	25	24	19	19	24	24	25	19
American Indian/Alaskan Native	7	5	2	2	2	3	0	2	5
Asian/Pacific Islander	62	93	76	74	77	57	70	60	64
Hispanic	35	38	29	44	33	30	26	25	18
White, non-Hispanic	876	1,200	1,224	1,164	1,047	1,040	1,061	947	829
Other or unknown	-	-	63	107	214	74	91	56	31
Foreign	-	-	276	229	212	190	165	144	180
Civil engineering:	5,307	4,755	5,123	5,118	5,163	5,009	5,073	4,879	4,905
Total U.S. citizens	-	-	4,153	4,236	4,240	3,987	4,022	3,803	3,933
Black, non-Hispanic	63	65	81	92	82	80	88	90	93
American Indian/Alaskan Native	2	16	11	10	7	13	4	9	8
Asian/Pacific Islander	187	196	206	183	159	173	240	277	274
Hispanic	96	92	126	125	111	99	106	112	123
White, non-Hispanic	2,795	2,604	3,111	3,134	3,064	2,895	2,968	3,049	3,181
Other or unknown	-	-	618	692	817	727	616	266	254
Foreign	-	-	970	882	923	1,022	1,051	1,076	972
Electrical engineering:	9,743	10,484	12,010	12,449	13,376	13,686	14,299	14,307	14,947
Total U.S. citizens	-	-	10,268	10,902	11,609	11,871	12,289	12,362	12,547
Black, non-Hispanic	103	159	167	196	228	154	181	218	239
American Indian/Alaskan Native	5	24	23	19	14	10	13	23	18
Asian/Pacific Islander	336	447	711	717	1,046	1,080	1,206	1,247	1,300
Hispanic	133	174	214	222	230	214	264	255	254
White, non-Hispanic	4,852	6,007	6,938	7,107	7,832	7,677	8,410	8,710	8,802
Other or unknown	-	-	2,215	2,641	2,259	2,736	2,215	1,909	1,934
Foreign	-	-	1,742	1,547	1,767	1,815	2,010	1,945	2,400

See footnotes at end of table.

Table B-48. Part-time science/engineering graduate students in all institutions by field, citizenship, and racial/ethnic background: 1981-89--Continued

Field, citizenship, and racial/ethnic background	1981 1/	1982 1/	1983	1984 2/	1985 2/	1986 2/	1987 2/	1988	1989
Industrial engineering:	6,384	6,039	6,287	6,382	7,574	8,271	8,489	7,534	6,977
Total U.S. citizens	-	-	5,920	5,989	7,184	7,839	7,865	6,901	6,276
Black, non-Hispanic	112	186	250	248	187	224	215	194	185
American Indian/Alaskan Native	15	16	14	12	6	8	21	11	9
Asian/Pacific Islander	145	165	138	152	212	232	279	278	260
Hispanic	75	86	166	231	172	180	193	175	134
White, non-Hispanic	3,910	4,259	4,678	4,566	5,816	6,111	6,672	5,879	5,198
Other or unknown	-	-	674	780	791	1,084	485	364	490
Foreign	-	-	367	393	390	432	624	633	701
Mechanical engineering:	4,196	4,200	4,581	5,157	5,282	5,939	6,129	5,795	5,790
Total U.S. citizens	-	-	3,986	4,417	4,512	5,126	5,290	4,882	4,834
Black, non-Hispanic	35	42	59	78	77	65	85	78	80
American Indian/Alaskan Native	1	11	8	21	14	10	11	4	7
Asian/Pacific Islander	124	155	212	222	343	330	359	315	332
Hispanic	41	43	61	59	86	143	174	107	94
White, non-Hispanic	1,920	2,783	3,220	3,480	3,690	3,842	3,932	3,831	3,702
Other or unknown	-	-	426	557	302	736	729	547	619
Foreign	-	-	595	740	770	813	839	913	956
Other engineering:	7,085	7,296	7,930	7,375	7,676	8,044	7,061	6,564	6,577
Total U.S. citizens	-	-	7,132	6,465	6,956	7,286	6,357	5,518	5,344
Black, non-Hispanic	126	148	167	142	125	194	125	98	81
American Indian/Alaskan Native	13	23	25	18	11	10	9	17	12
Asian/Pacific Islander	262	272	352	357	415	487	514	510	463
Hispanic	69	67	101	110	112	123	121	113	90
White, non-Hispanic	4,505	4,846	5,375	5,169	4,732	5,560	5,013	4,152	4,076
Other or unknown	-	-	1,112	669	1,561	912	575	628	622
Foreign	-	-	798	910	720	758	704	1,046	1,233
Health fields:	19,462	20,891	21,336	22,736	23,346	24,855	24,982	26,084	27,332
Total U.S. citizens	-	-	20,681	22,153	22,726	24,208	24,377	25,489	26,695
Black, non-Hispanic	702	878	1,150	1,183	1,156	1,157	1,198	1,319	1,323
American Indian/Alaskan Native	35	58	78	69	56	70	71	80	103
Asian/Pacific Islander	257	357	408	408	432	411	409	518	545
Hispanic	264	365	572	502	563	551	660	816	840
White, non-Hispanic	12,486	17,314	17,665	18,896	18,961	20,283	20,077	21,030	22,205
Other or unknown	-	-	808	1,095	1,558	1,736	1,962	1,726	1,679
Foreign	-	-	655	583	620	647	605	595	637

1/ For part-time students, distribution by citizenship was first requested in 1982 and did not become a standard question until 1983.

2/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

SOURCE: National Science Foundation, SRS

Table B-49. Part-time science/engineering graduate students with U.S. citizenship in all institutions by field: 1984-89

Field	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	130,909	136,779	138,742	138,571	137,844	139,140
Total, science/engineering fields	108,756	114,053	114,534	114,194	112,355	112,445
Engineering, total	33,419	35,893	37,337	37,095	34,581	33,900
Aerospace	527	580	707	690	701	704
Agricultural	141	140	127	107	118	124
Biomedical	198	211	225	239	234	246
Chemical	1,410	1,392	1,228	1,272	1,115	966
Civil	4,236	4,240	3,987	4,022	3,803	3,933
Electrical	10,902	11,609	11,871	12,289	12,362	12,547
Engineering science	829	769	872	888	871	692
Industrial	5,989	7,184	7,839	7,865	6,901	6,276
Mechanical	4,417	4,512	5,126	5,290	4,882	4,834
Metallurgical/materials	696	769	731	826	733	748
Mining	72	87	56	59	61	73
Nuclear	178	168	189	205	170	180
Petroleum	121	178	148	152	125	134
Engineering, n.e.c.	3,703	4,054	4,231	3,191	2,505	2,443
Sciences, total	75,337	78,160	77,197	77,099	77,774	78,545
Physical sciences	3,767	3,868	3,966	3,724	3,770	3,739
Astronomy	38	32	32	31	20	21
Chemistry	2,359	2,457	2,425	2,237	2,160	2,170
Physics	1,208	1,211	1,296	1,285	1,397	1,337
Physical sciences, n.e.c.	162	168	213	171	193	211
Earth, atmospheric, and ocean sciences	3,584	3,903	3,635	3,724	3,473	3,445
Atmospheric sciences	112	79	99	108	95	88
Geosciences	2,172	2,510	2,330	2,220	2,060	1,977
Oceanography	471	486	400	428	376	367
Earth, atm. & oc. sci., n.e.c.	829	828	806	968	942	1,013
Mathematical sciences	5,504	5,253	4,926	4,897	4,986	4,995
Computer sciences	12,399	13,835	14,243	14,322	14,941	14,250
Agricultural sciences	2,097	2,025	1,905	1,768	1,755	1,829
Biological sciences	8,122	8,592	8,385	7,923	7,782	7,856
Anatomy	89	101	76	84	81	73
Biochemistry	207	186	200	176	163	199
Biology	3,740	3,996	3,913	3,603	3,487	3,395
Biometry/epidemiology	236	338	345	349	407	447
Biophysics	12	57	79	98	45	45
Botany	367	442	359	359	333	338
Cell biology	45	20	54	72	47	52
Ecology	194	137	146	161	179	217
Entomology/parasitology	158	181	177	154	145	138
Genetics	67	57	78	95	92	75
Microbiology	444	500	459	401	408	436
Nutrition	1,148	1,178	1,159	1,146	1,228	1,256
Pathology	362	298	301	281	256	266
Pharmacology	121	110	111	133	122	115
Physiology	186	218	207	207	202	136
Zoology	401	398	335	297	283	282
Biosciences, n.e.c.	345	375	383	307	304	386
Psychology	14,622	15,203	14,696	15,032	15,534	15,732
Social sciences	25,242	25,481	25,441	25,709	25,533	26,699
Agricultural economics	199	205	224	239	236	250
Anthropology	1,545	1,619	1,648	1,647	1,590	1,629
Economics (except agricultural)	3,053	2,900	2,611	2,466	2,453	2,399
Geography	786	769	884	864	928	1,088
History and philosophy of science	31	41	26	25	21	30
Linguistics	700	589	619	682	588	722
Political science	12,528	13,262	13,159	13,784	13,720	14,339
Sociology	1,795	1,713	1,719	1,716	1,744	1,816
Sociology/anthropology	434	436	412	386	392	360
Social sciences, n.e.c.	4,171	3,947	4,139	3,900	3,861	4,066
Total, health fields	22,153	22,726	24,208	24,377	25,489	26,695
Dentistry	79	83	110	134	143	135
Neurology	3	2	10	19	10	18
Nursing	11,770	11,795	12,446	12,446	12,852	13,788
Pharmaceutical sciences	641	669	703	644	598	650
Preventive medicine/community health	2,782	2,971	2,965	3,231	3,285	3,359
Speech pathology/audiology	2,420	2,461	2,493	2,361	2,402	2,356
Veterinary sciences	113	115	109	125	134	122
Clinical medicine, n.e.c.	504	544	510	537	550	419
Health related, n.e.c.	3,841	4,086	4,862	4,880	5,515	5,848

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-50. Foreign part-time science/engineering graduate students in all institutions by field: 1984-89

Field	1984 1/	1985 1/	1986 1/	1987 1/	1988	1989
Total, all surveyed fields	11,672	11,696	12,192	13,353	13,820	15,224
Total, science/engineering fields	11,089	11,076	11,545	12,748	13,225	14,587
Engineering, total	4,701	4,782	5,030	5,393	5,757	6,442
Aerospace	64	84	63	59	84	83
Agricultural	40	34	46	32	42	56
Biomedical	26	33	30	58	66	62
Chemical	229	212	190	165	144	180
Civil	882	923	1,022	1,051	1,076	972
Electrical	1,547	1,767	1,815	2,010	1,945	2,400
Engineering science	52	65	45	85	103	126
Industrial	393	390	432	624	633	701
Mechanical	740	770	813	839	913	956
Metallurgical/materials	89	81	92	86	118	111
Mining	6	11	14	19	13	21
Nuclear	38	22	17	30	28	31
Petroleum	9	27	27	22	18	25
Engineering, n.e.c.	586	363	424	313	574	718
Sciences, total	6,388	6,294	6,515	7,355	7,468	8,145
Physical sciences	445	458	530	600	628	681
Astronomy	5	4	3	10	6	6
Chemistry	274	272	323	352	330	375
Physics	163	179	190	221	277	283
Physical sciences, n.e.c.	3	3	14	17	15	17
Earth, atmospheric, and ocean sciences	209	203	205	255	263	279
Atmospheric sciences	19	13	7	20	16	14
Geosciences	105	81	105	112	121	127
Oceanography	32	33	34	48	28	41
Earth, atm. & oc. sci., n.e.c.	53	76	59	75	98	97
Mathematical sciences	655	527	666	637	653	686
Computer sciences	1,824	1,908	1,872	2,243	2,250	2,638
Agricultural sciences	215	258	195	253	259	265
Biological sciences	569	584	653	702	727	794
Anatomy	4	1	4	3	2	6
Biochemistry	20	17	45	33	27	58
Biology	194	205	217	220	232	234
Biometry/epidemiology	17	26	41	33	48	52
Biophysics	2	3	19	25	3	0
Botany	44	57	48	69	65	75
Cell biology	2	3	7	6	8	10
Ecology	17	15	9	6	13	13
Entomology/parasitology	16	23	22	28	34	34
Genetics	6	6	13	11	10	7
Microbiology	56	68	44	37	57	63
Nutrition	111	96	107	128	133	140
Pathology	23	21	27	26	18	17
Pharmacology	3	7	12	17	18	20
Physiology	5	7	8	10	10	13
Zoology	39	19	25	29	32	33
Biosciences, n.e.c.	10	10	5	21	17	19
Psychology	344	336	334	327	331	295
Social sciences	2,127	2,020	2,060	2,338	2,357	2,507
Agricultural economics	53	73	60	107	114	114
Anthropology	77	96	96	80	79	113
Economics (except agricultural)	722	627	570	640	627	697
Geography	74	43	63	69	65	65
History and philosophy of science	0	4	3	2	1	1
Linguistics	141	129	132	151	147	165
Political science	595	579	698	834	779	827
Sociology	200	210	190	203	230	265
Sociology/anthropology	35	33	25	36	33	29
Social sciences, n.e.c.	230	226	223	216	282	231
Total, health fields	583	620	647	605	595	637
Dentistry	3	7	3	14	12	14
Neurology	1	0	0	0	0	4
Nursing	104	122	100	109	111	107
Pharmaceutical sciences	107	92	[illegible]	139	108	106
Preventive medicine/community health	104	184	[illegible]	167	169	179
Speech pathology/audiology	65	79	71	51	51	64
Veterinary sciences	19	7	15	14	12	11
Clinical medicine, n.e.c.	28	23	42	34	28	30
Health related, n.e.c.	152	106	97	77	104	122

1/ Includes estimated data for master's-granting institutions, which were surveyed on a sample basis from 1984 through 1987. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-51. Science/engineering graduate students in historically black colleges and universities by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	3,391	3,269	3,446	3,875	3,587	3,454	3,242	3,516	3,429
Total, science/engineering fields	3,249	3,103	3,269	3,693	3,404	3,290	3,082	3,361	3,228
Engineering, total	242	267	311	405	342	374	375	422	425
Aerospace	0	0	0	0	0	0	0	0	0
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	0	0	0	0	0	0	0	0	0
Chemical	0	0	0	0	0	0	0	0	0
Civil	53	44	47	65	46	47	52	57	72
Electrical	66	64	94	131	121	61	129	111	129
Engineering science	0	0	0	0	0	0	0	0	0
Industrial	7	8	23	37	20	0	10	26	26
Mechanical	30	30	47	93	81	63	65	102	72
Metallurgical/materials	0	0	0	0	0	0	0	0	0
Mining	0	0	0	0	0	0	0	0	0
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	0	0	0	0	0	0	0	0	0
Engineering, n.e.c.	86	121	100	79	74	203	119	126	126
Sciences, total	3,007	2,836	2,958	3,288	3,062	2,916	2,707	2,939	2,803
Physical sciences	284	288	319	347	320	299	300	328	306
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	217	226	250	269	228	196	197	204	203
Physics	67	58	57	65	72	84	100	112	94
Physical sciences, n.e.c.	0	4	12	13	20	19	3	12	9
Earth, atmospheric, and ocean sciences	23	31	32	39	34	19	16	36	27
Atmospheric sciences	0	0	0	0	0	0	0	0	0
Geosciences	2	13	16	23	17	19	16	13	2
Oceanography	0	0	0	0	0	0	0	23	25
Earth, atm. & oc. sci., n.e.c.	21	18	16	16	17	0	0	0	0
Mathematical sciences	168	206	235	266	240	265	259	252	255
Computer sciences	150	232	271	320	304	279	229	277	290
Agricultural sciences	83	87	82	109	66	55	52	64	66
Biological sciences	610	605	593	536	479	447	409	414	447
Anatomy	8	10	8	6	11	9	6	11	9
Biochemistry	21	22	18	19	11	14	12	15	15
Biology	323	334	323	301	267	229	207	180	206
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	50	45	44	17	16	37	32	38	43
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	0	0	0	0	0	0	0	0	0
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	16	25	27	29	30	32	25	26	26
Microbiology	27	24	26	24	21	14	10	7	8
Nutrition	39	36	20	36	34	34	35	43	44
Pathology	0	0	0	0	0	0	0	0	0
Pharmacology	34	35	36	25	15	17	12	10	8
Physiology	17	14	19	22	27	20	22	22	24
Zoology	55	41	40	29	25	22	23	23	22
Biosciences, n.e.c.	20	19	32	28	22	19	25	39	42
Psychology	268	227	384	436	404	419	374	443	375
Social sciences	1,421	1,160	1,042	1,235	1,215	1,133	1,068	1,125	1,037
Agricultural economics	22	39	53	62	63	59	46	48	49
Anthropology	0	0	0	0	0	0	0	0	0
Economics (except agricultural)	250	284	106	135	161	147	123	132	99
Geography	0	0	0	0	0	0	0	0	0
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	104	24	43	137	129	129	144	136	137
Political science	452	286	297	392	345	389	367	399	212
Sociology	283	217	214	173	226	179	195	185	180
Sociology/anthropology	95	105	113	113	80	60	62	58	58
Social sciences, n.e.c.	215	205	216	223	211	170	131	167	302
Total, health fields	142	166	177	182	183	164	160	155	201
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0	0	0
Nursing	45	63	68	59	46	38	50	45	41
Pharmaceutical sciences	15	12	13	13	16	15	14	22	42
Preventive medicine/community health	11	8	11	0	0	0	0	0	0
Speech pathology/audiology	48	58	59	81	84	83	67	62	42
Veterinary sciences	23	25	26	26	27	23	20	17	19
Clinical medicine, n.e.c.	0	0	0	3	0	0	0	0	57
Health related, n.e.c.	0	0	0	0	10	5	9	9	0

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-52. Male science/engineering graduate students in historically black colleges and universities by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	2,072	1,899	1,981	2,322	2,145	2,052	1,994	2,130	2,008
Total, science/engineering fields	2,033	1,867	1,949	2,288	2,107	2,017	1,964	2,080	1,932
Engineering, total	226	242	274	364	306	315	318	357	362
Aerospace	0	0	0	0	0	0	0	0	0
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	0	0	0	0	0	0	0	0	0
Chemical	0	0	0	0	0	0	0	0	0
Civil	46	32	33	54	37	27	30	30	55
Electrical	62	61	87	121	110	50	112	99	113
Engineering science	0	0	0	0	0	0	0	0	0
Industrial	6	8	18	32	13	0	8	21	17
Mechanical	30	29	45	86	74	60	59	93	66
Metallurgical/materials	0	0	0	0	0	0	0	0	0
Mining	0	0	0	0	0	0	0	0	0
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	0	0	0	0	0	0	0	0	0
Engineering, n.e.c.	82	112	91	71	72	178	109	114	111
Sciences, total	1,807	1,625	1,675	1,924	1,801	1,702	1,646	1,723	1,570
Physical sciences	199	182	197	235	207	214	216	235	218
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	141	135	145	171	135	136	128	135	136
Physics	58	46	47	58	64	71	86	94	80
Physical sciences, n.e.c.	0	1	5	6	8	7	2	6	2
Earth, atmospheric, and ocean sciences	18	19	16	20	27	10	11	19	15
Atmospheric sciences	0	0	0	0	0	0	0	0	0
Geosciences	1	7	6	9	12	10	11	9	2
Oceanography	0	0	0	0	0	0	0	10	13
Earth, atm. & oc. sci., n.e.c.	17	12	10	11	15	0	0	0	0
Mathematical sciences	87	111	139	162	140	160	178	168	163
Computer sciences	96	150	185	221	220	196	171	181	183
Agricultural sciences	70	74	68	102	51	46	44	56	57
Biological sciences	340	316	321	274	222	225	209	213	207
Anatomy	5	5	5	4	4	3	2	5	3
Biochemistry	12	11	11	12	6	9	10	14	13
Biology	182	177	173	151	114	92	92	89	93
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	30	10	9	11	7	26	20	20	22
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	0	0	0	0	0	0	0	0	0
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	6	6	12	11	13	14	9	11	8
Microbiology	10	11	8	8	9	6	4	3	4
Nutrition	30	25	16	29	25	25	24	17	24
Pathology	0	0	0	0	0	0	0	0	0
Pharmacology	21	21	21	13	4	8	4	4	2
Physiology	8	10	14	13	16	15	17	14	15
Zoology	27	31	30	14	14	16	17	17	10
Biosciences, n.e.c.	9	9	22	8	10	11	10	19	13
Psychology	110	97	177	194	177	167	149	159	135
Social sciences	887	676	572	716	757	684	668	692	592
Agricultural economics	17	33	44	53	55	55	41	42	42
Anthropology	0	0	0	0	0	0	0	0	0
Economics (except agricultural)	215	195	76	101	131	114	95	106	74
Geography	0	0	0	0	0	0	0	0	0
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	33	3	10	50	43	43	75	70	54
Political science	298	164	162	252	227	250	250	264	156
Sociology	153	107	105	63	117	77	92	92	85
Sociology/anthropology	43	41	41	53	43	27	28	26	19
Social sciences, n.e.c.	128	133	134	144	141	118	87	92	162
Total, health fields	39	32	32	34	38	35	30	50	76
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0	0	0
Nursing	0	0	1	1	0	1	0	0	1
Pharmaceutical sciences	15	8	9	9	11	10	9	14	25
Preventive medicine/community health	6	3	7	0	0	0	0	0	0
Speech pathology/audiology	3	5	3	3	2	2	0	19	0
Veterinary sciences	15	16	12	20	22	20	17	13	15
Clinical medicine, n.e.c.	0	0	0	1	0	0	0	0	35
Health related, n.e.c.	0	0	0	0	3	2	4	4	0

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-53. Female science/engineering graduate students in historically black colleges and universities by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	1,319	1,370	1,465	1,553	1,442	1,402	1,248	1,386	1,421
Total, science/engineering fields	1,216	1,236	1,320	1,405	1,297	1,273	1,118	1,281	1,296
Engineering, total	16	25	37	41	36	59	57	65	63
Aerospace	0	0	0	0	0	0	0	0	0
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	0	0	0	0	0	0	0	0	0
Chemical	0	0	0	0	0	0	0	0	0
Civil	7	12	14	11	9	20	22	27	17
Electrical	4	3	7	10	11	11	17	12	16
Engineering science	0	0	0	0	0	0	0	0	0
Industrial	1	0	5	5	7	0	2	5	9
Mechanical	0	1	2	7	7	3	6	9	6
Metallurgical/materials	0	0	0	0	0	0	0	0	0
Mining	0	0	0	0	0	0	0	0	0
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	0	0	0	0	0	0	0	0	0
Engineering, n.e.c.	4	9	9	8	2	25	10	12	15
Sciences, total	1,200	1,211	1,283	1,364	1,261	1,214	1,061	1,216	1,233
Physical sciences	85	106	122	112	113	85	84	93	88
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	76	91	105	98	93	60	69	69	67
Physics	9	12	10	7	8	13	14	18	14
Physical sciences, n.e.c.	0	3	7	7	12	12	1	6	7
Earth, atmospheric, and ocean sciences	5	12	16	19	7	9	5	17	12
Atmospheric sciences	0	0	0	0	0	0	0	0	0
Geosciences	1	6	10	14	5	9	5	4	0
Oceanography	0	0	0	0	0	0	0	13	12
Earth, atm. & oc. sci., n.e.c.	4	6	6	5	2	0	0	0	0
Mathematical sciences	81	95	96	104	100	105	81	84	92
Computer sciences	54	82	86	99	84	83	58	96	107
Agricultural sciences	13	13	14	7	15	9	8	8	9
Biological sciences	270	289	272	262	257	222	200	201	240
Anatomy	3	5	3	2	7	6	4	6	6
Biochemistry	9	11	7	7	5	5	2	1	2
Biology	141	157	150	150	153	137	115	91	113
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	20	35	35	6	9	11	12	18	21
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	0	0	0	0	0	0	0	0	0
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	10	19	15	18	17	18	16	15	18
Microbiology	17	13	18	16	12	8	6	4	4
Nutrition	9	11	4	7	9	9	11	26	20
Pathology	0	0	0	0	0	0	0	0	0
Pharmacology	13	14	15	12	11	9	8	6	6
Physiology	9	4	5	9	11	5	5	8	9
Zoology	28	10	10	15	11	6	6	6	12
Biosciences, n.e.c.	11	10	10	20	12	8	15	20	29
Psychology	158	130	207	242	227	252	225	284	240
Social sciences	534	484	470	519	458	449	400	433	445
Agricultural economics	5	6	9	9	8	4	5	6	7
Anthropology	0	0	0	0	0	0	0	0	0
Economics (except agricultural)	35	89	30	34	30	33	28	26	25
Geography	0	0	0	0	0	0	0	0	0
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	71	21	33	87	86	86	69	66	83
Political science	154	122	135	140	118	139	117	135	56
Sociology	130	110	109	110	109	102	103	93	95
Sociology/anthropology	52	64	72	60	37	33	34	32	39
Social sciences, n.e.c.	87	72	82	79	70	52	44	75	140
Total, health fields	103	134	145	148	145	129	130	105	125
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0	0	0
Nursing	45	63	67	58	46	37	50	45	40
Pharmaceutical sciences	0	4	4	4	5	5	5	8	17
Preventive medicine/community health	5	5	4	0	0	0	0	0	0
Speech pathology/audiology	45	53	56	78	82	81	67	43	42
Veterinary sciences	8	9	14	6	5	3	3	4	4
Clinical medicine, n.e.c.	0	0	0	2	0	0	0	0	22
Health related, n.e.c.	0	0	0	0	7	3	5	5	0

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-54. Full-time science/engineering graduate students in historically black colleges and universities by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	2,411	2,230	2,231	2,357	2,335	2,151	2,126	2,322	2,091
Total, science/engineering fields	2,316	2,121	2,107	2,240	2,200	2,029	2,009	2,210	1,941
Engineering, total	170	192	195	258	273	197	283	333	326
Aerospace	0	0	0	0	0	0	0	0	0
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	0	0	0	0	0	0	0	0	0
Chemical	0	0	0	0	0	0	0	0	0
Civil	43	31	34	38	42	32	35	40	57
Electrical	59	57	84	102	111	45	104	104	104
Engineering science	0	0	0	0	0	0	0	0	0
Industrial	7	8	10	22	18	0	10	20	19
Mechanical	25	26	34	63	71	60	60	92	64
Metallurgical/materials	0	0	0	0	0	0	0	0	0
Mining	0	0	0	0	0	0	0	0	0
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	0	0	0	0	0	0	0	0	0
Engineering, n.e.c.	36	70	33	33	31	60	74	77	82
Sciences, total	2,146	1,929	1,912	1,982	1,927	1,832	1,726	1,877	1,615
Physical sciences	255	256	271	258	262	239	244	272	217
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	193	205	222	205	194	169	165	180	141
Physics	62	50	49	52	65	64	77	88	74
Physical sciences, n.e.c.	0	1	0	1	3	6	2	4	2
Earth, atmospheric, and ocean sciences	18	29	27	25	25	7	9	18	17
Atmospheric sciences	0	0	0	0	0	0	0	0	0
Geosciences	0	11	11	9	8	7	9	6	2
Oceanography	0	0	0	0	0	0	0	12	15
Earth, atm. & oc. sci., n.e.c.	18	18	16	16	17	0	0	0	0
Mathematical sciences	120	111	137	139	141	143	168	169	160
Computer sciences	87	153	185	202	212	206	163	209	169
Agricultural sciences	42	46	39	79	27	26	36	41	45
Biological sciences	479	487	511	422	369	348	325	299	339
Anatomy	8	10	8	6	11	9	6	11	9
Biochemistry	21	22	18	19	11	14	12	15	15
Biology	220	242	260	218	172	149	139	102	129
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	37	33	32	5	11	31	26	31	31
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	0	0	0	0	0	0	0	0	0
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	16	25	25	27	27	29	25	22	22
Microbiology	27	24	26	24	20	14	10	7	8
Nutrition	37	28	20	36	34	32	34	30	34
Pathology	0	0	0	0	0	0	0	0	0
Pharmacology	32	32	34	24	15	16	12	9	8
Physiology	17	14	19	22	26	19	22	21	23
Zoology	45	39	38	18	23	17	18	18	22
Biosciences, n.e.c.	19	18	31	23	19	18	21	33	38
Psychology	153	120	132	173	159	183	163	202	162
Social sciences	992	727	610	684	732	680	618	667	506
Agricultural economics	20	19	50	49	41	46	31	29	27
Anthropology	0	0	0	0	0	0	0	0	0
Economics (except agricultural)	210	234	60	59	103	91	86	88	63
Geography	0	0	0	0	0	0	0	0	0
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	84	19	38	61	72	72	82	80	60
Political science	332	162	143	245	216	249	197	229	81
Sociology	194	128	136	97	141	91	102	102	107
Sociology/anthropology	47	74	81	61	49	27	28	27	37
Social sciences, n.e.c.	105	91	102	112	110	104	92	112	131
Total, health fields	95	109	124	117	135	122	117	112	150
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0	0	0
Nursing	23	40	47	29	34	28	31	26	24
Pharmaceutical sciences	15	12	13	13	16	15	14	22	31
Preventive medicine/community health	6	6	10	0	0	0	0	0	0
Speech pathology/audiology	29	29	28	49	51	54	46	38	19
Veterinary sciences	22	22	26	23	24	20	17	17	19
Clinical medicine, n.e.c.	0	0	0	3	0	0	0	0	57
Health related, n.e.c.	0	0	0	0	10	5	9	9	0

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table 8-55. Full-time science/engineering graduate students in historically black colleges and universities by type and source of major support: 1981-89

Type and source of major support	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all types:									
Total, all sources	2,411	2,230	2,231	2,357	2,335	2,151	2,126	2,322	2,091
Federal, total	537	543	538	585	692	546	534	612	561
Dept of Defense	22	20	33	50	38	54	54	59	75
Dept of HHS, total	195	206	215	209	199	194	179	189	177
NIH	152	168	187	181	165	154	152	160	147
Other HHS	43	38	28	28	34	40	27	29	30
NSF	103	70	50	39	25	33	43	51	47
All other Federal	217	247	240	287	430	265	258	313	262
Institutional support	610	622	642	592	411	464	513	554	625
Other outside support, total	90	129	136	114	105	172	200	195	220
All other U.S.	64	94	96	94	80	150	155	154	179
Foreign	26	35	40	20	25	22	45	41	41
Self-support	1,174	936	915	1,066	1,127	969	879	961	685
Fellowships:									
Total, all sources	219	244	236	252	264	165	233	275	266
Federal, total	77	78	64	99	145	94	104	105	92
Dept of Defense	1	0	0	3	0	0	13	3	4
Dept of HHS, total	23	17	10	18	30	16	6	14	11
NIH	21	12	5	13	21	7	6	6	1
Other HHS	2	5	5	5	9	9	0	8	10
NSF	26	12	10	7	10	5	15	9	7
All other Federal	27	49	44	71	105	73	70	79	70
Institutional support	112	108	97	100	70	53	93	123	90
Other outside support, total	30	58	75	53	49	18	36	47	84
All other U.S.	16	47	53	39	31	10	26	38	74
Foreign	14	11	22	14	18	8	10	9	10
Self-support	0	0	0	0	0	0	0	0	0
Traineeships:									
Total, all sources	184	194	210	192	158	162	148	113	129
Federal, total	169	167	175	169	139	114	104	72	55
Dept of Defense	0	1	5	1	0	0	1	0	0
Dept of HHS, total	94	96	110	111	97	99	93	60	50
NIH	65	74	93	90	72	73	67	39	30
Other HHS	29	22	17	21	25	26	26	21	20
NSF	43	37	19	8	1	2	1	0	0
All other Federal	32	33	41	49	41	13	9	12	5
Institutional support	11	20	25	18	18	38	33	36	74
Other outside support, total	4	7	10	5	1	10	11	5	0
All other U.S.	4	3	0	1	1	3	2	0	0
Foreign	0	4	10	4	0	7	9	5	0
Self-support	0	0	0	0	0	0	0	0	0
Research assistantships:									
Total, all sources	353	319	362	423	329	346	341	436	458
Federal, total	214	224	243	274	274	255	265	338	344
Dept of Defense	16	14	27	45	38	40	29	43	58
Dept of HHS, total	74	82	85	76	65	70	61	99	104
NIH	66	77	80	76	65	65	61	99	104
Other HHS	8	5	5	0	0	5	0	0	0
NSF	28	18	18	18	14	23	23	37	35
All other Federal	96	110	113	135	157	122	152	159	147
Institutional support	113	79	103	118	38	70	55	76	94
Other outside support, total	26	16	16	31	17	21	21	22	20
All other U.S.	19	14	15	30	11	15	18	20	15
Foreign	7	2	1	1	6	6	3	2	5
Self-support	0	0	0	0	0	0	0	0	0
Teaching assistantships:									
Total, all sources	303	385	357	323	307	308	322	361	328
Federal, total	6	16	3	7	52	35	11	68	26
Dept of Defense	0	0	0	0	0	0	0	0	0
Dept of HHS, total	0	8	3	2	2	2	4	9	3
NIH	0	2	3	0	2	2	4	9	3
Other HHS	0	6	0	2	0	0	0	0	0
NSF	0	0	0	4	0	3	1	5	4
All other Federal	6	8	0	1	50	30	6	54	19
Institutional support	291	357	350	296	236	252	275	261	256
Other outside support, total	6	12	4	20	19	21	36	32	46
All other U.S.	6	12	4	20	19	21	36	32	46
Foreign	0	0	0	0	0	0	0	0	0
Self-support	0	0	0	0	0	0	0	0	0
Other types of support:									
Total, all sources	1,352	1,088	1,066	1,167	1,277	1,170	1,082	1,137	910
Federal, total	71	58	53	36	82	48	50	29	44
Dept of Defense	5	5	1	1	0	14	11	13	13
Dept of HHS, total	4	3	7	2	5	7	15	7	9
NIH	0	3	6	2	5	7	14	7	9
Other HHS	4	0	1	0	0	0	1	0	0
NSF	6	3	3	2	0	0	3	0	1
All other Federal	56	47	42	31	77	27	21	9	21
Institutional support	83	58	67	60	49	51	57	58	111
Other outside support, total	24	36	31	5	19	102	96	89	70
All other U.S.	19	18	24	4	18	101	73	64	44
Foreign	5	18	7	1	1	1	23	25	26
Self-support	1,174	936	915	1,066	1,127	969	879	961	685

SOURCE: National Science Foundation, SRS

Table B-56. Part-time science/engineering graduate students in historically black colleges and universities by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	980	1,039	1,215	1,518	1,252	1,303	1,116	1,194	1,338
Total, science/engineering fields	933	982	1,162	1,453	1,204	1,261	1,073	1,151	1,287
Engineering, total	72	75	116	147	69	177	92	89	99
Aerospace	0	0	0	0	0	0	0	0	0
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	0	0	0	0	0	0	0	0	0
Chemical	0	0	0	0	0	0	0	0	0
Civil	10	13	13	27	4	15	17	17	15
Electrical	7	7	10	29	10	16	25	7	25
Engineering science	0	0	0	0	0	0	0	0	0
Industrial	0	0	13	15	2	0	0	6	7
Mechanical	5	4	13	30	10	3	5	10	8
Metallurgical/materials	0	0	0	0	0	0	0	0	0
Mining	0	0	0	0	0	0	0	0	0
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	0	0	0	0	0	0	0	0	0
Engineering, n.e.c.	50	51	67	46	43	143	45	49	44
Sciences, total	861	907	1,046	1,306	1,135	1,084	981	1,062	1,188
Physical sciences	29	32	48	89	58	60	56	56	89
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	24	21	28	64	34	27	32	24	62
Physics	5	8	8	13	7	20	23	24	20
Physical sciences, n.e.c.	0	3	12	12	17	13	1	8	7
Earth, atmospheric, and ocean sciences	5	2	5	14	9	12	7	18	10
Atmospheric sciences	0	0	0	0	0	0	0	0	0
Geosciences	2	2	5	14	9	12	7	7	0
Oceanography	0	0	0	0	0	0	0	11	10
Earth, atm. & oc. sci., n.e.c.	3	0	0	0	0	0	0	0	0
Mathematical sciences	48	95	98	127	99	122	91	83	95
Computer sciences	63	79	86	118	92	73	66	68	121
Agricultural sciences	41	41	43	30	39	29	16	23	21
Biological sciences	131	118	82	114	110	99	84	115	108
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	0	0	0	0	0	0	0	0	0
Biology	103	92	63	83	95	80	68	78	77
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	13	12	12	12	5	6	6	7	12
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	0	0	0	0	0	0	0	0	0
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	0	0	2	2	3	3	0	4	4
Microbiology	0	0	0	0	1	0	0	0	0
Nutrition	2	8	0	0	0	2	1	13	10
Pathology	0	0	0	0	0	0	0	0	0
Pharmacology	2	3	2	1	0	1	0	1	0
Physiology	0	0	0	0	1	1	0	1	1
Zoology	10	2	2	11	2	5	5	5	0
Biosciences, n.e.c.	1	1	1	5	3	1	4	6	4
Psychology	115	107	252	263	245	236	211	241	213
Social sciences	429	433	432	551	483	453	450	458	531
Agricultural economics	2	20	3	13	22	13	15	19	22
Anthropology	0	0	0	0	0	0	0	0	0
Economics (except agricultural)	40	50	46	76	58	56	37	44	36
Geography	0	0	0	0	0	0	0	0	0
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	20	5	5	76	57	57	62	56	77
Political science	120	124	154	147	129	140	170	170	131
Sociology	89	89	78	76	85	88	93	83	73
Sociology/anthropology	48	31	32	52	31	33	34	31	21
Social sciences, n.e.c.	110	114	114	111	101	66	39	55	171
Total, health fields	47	57	53	65	48	42	43	43	51
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0	0	0
Nursing	22	23	21	30	12	10	19	19	17
Pharmaceutical sciences	0	0	0	0	0	0	0	0	11
Preventive medicine/community health	5	2	1	0	0	0	0	0	0
Speech pathology/audiology	19	29	31	32	33	29	21	24	23
Veterinary sciences	1	3	0	3	3	3	3	0	0
Clinical medicine, n.e.c.	0	0	0	0	0	0	0	0	0
Health related, n.e.c.	0	0	0	0	0	0	0	0	0

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-57. Science/engineering graduate students in land-grant institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	119,554	122,192	124,644	125,598	127,684	131,972	132,274	134,333	137,989
Total, science/engineering fields	109,437	111,856	115,023	115,832	117,578	121,869	121,998	123,351	126,301
Engineering, total	26,995	29,015	31,111	30,931	31,874	34,482	35,121	35,305	36,152
Aerospace	709	729	959	943	1,022	1,093	1,103	1,173	1,253
Agricultural	732	805	900	883	850	929	937	929	922
Biomedical	290	310	325	328	347	415	482	487	542
Chemical	2,660	2,846	2,962	2,851	2,814	2,841	2,889	2,742	2,787
Civil	5,235	5,371	5,785	5,830	5,812	5,934	5,785	6,045	6,047
Electrical	6,081	6,689	7,505	7,770	8,377	9,134	9,657	9,717	10,012
Engineering science	548	567	628	632	685	878	855	827	910
Industrial	2,567	2,725	2,309	2,410	2,773	3,048	2,997	2,836	3,139
Mechanical	4,124	4,595	5,182	5,365	5,267	5,804	6,040	6,138	5,971
Metallurgical/materials	1,318	1,313	1,403	1,544	1,660	1,785	1,788	1,813	1,960
Mining	203	231	294	270	260	296	287	269	242
Nuclear	799	796	803	806	828	890	880	878	906
Petroleum	75	121	197	225	201	213	239	202	212
Engineering, n.e.c.	1,654	1,917	1,859	1,074	978	1,222	1,182	1,249	1,249
Sciences, total	82,442	82,841	83,912	84,901	85,704	87,387	86,877	88,046	90,149
Physical sciences	10,774	11,153	11,516	11,783	12,102	12,589	12,775	12,959	13,077
Astronomy	220	242	244	257	277	287	286	287	306
Chemistry	6,308	6,580	6,856	6,917	7,115	7,249	7,299	7,269	7,345
Physics	4,196	4,273	4,360	4,542	4,661	5,001	5,149	5,371	5,393
Physical sciences, n.e.c.	50	58	56	67	49	52	41	32	33
Earth, atmospheric, and ocean sciences	5,857	6,104	6,338	6,329	6,295	6,247	5,885	5,727	5,738
Atmospheric sciences	550	562	533	548	564	555	540	554	574
Geosciences	3,334	3,658	3,940	3,964	3,882	3,742	3,380	3,197	3,053
Oceanography	1,098	1,055	1,056	1,074	1,060	1,107	1,105	1,078	1,204
Earth, atm. & oc. sci., n.e.c.	875	829	809	743	789	843	860	898	907
Mathematical sciences	4,771	4,922	5,191	5,461	5,619	5,956	6,296	6,651	6,786
Computer sciences	3,952	4,346	4,858	5,393	6,059	6,258	6,378	6,469	6,586
Agricultural sciences	9,774	9,852	9,820	9,569	9,133	9,150	8,921	8,794	8,730
Biological sciences	19,266	18,952	19,055	19,115	19,223	19,454	19,277	19,438	19,855
Anatomy	357	333	342	342	311	298	310	342	353
Biochemistry	1,763	1,791	1,873	1,986	2,130	2,237	2,108	2,164	2,216
Biology	2,407	2,284	2,318	2,342	2,344	2,350	2,478	2,511	2,681
Biometry/epidemiology	104	119	124	108	123	199	148	153	158
Biophysics	130	120	115	110	155	164	173	167	209
Botany	2,724	2,821	2,678	2,657	2,638	2,605	2,459	2,461	2,439
Cell biology	303	371	394	453	498	615	749	803	873
Ecology	683	658	650	685	659	629	590	619	636
Entomology/parasitology	1,422	1,309	1,264	1,226	1,170	1,148	1,065	1,057	1,029
Genetics	518	517	538	539	555	620	647	603	605
Microbiology	1,921	1,877	1,995	1,996	2,104	1,998	2,029	2,140	2,111
Nutrition	2,877	2,793	2,703	2,724	2,720	2,746	2,682	2,603	2,601
Pathology	543	556	581	527	522	513	527	484	515
Pharmacology	739	757	834	834	815	831	821	844	938
Physiology	854	800	763	810	845	807	833	829	843
Zoology	1,676	1,581	1,597	1,524	1,381	1,372	1,374	1,317	1,291
Biosciences, n.e.c.	245	265	286	252	253	322	284	341	357
Psychology	6,779	6,769	6,977	7,130	7,378	7,395	7,088	7,560	7,845
Social sciences	21,269	20,743	20,157	20,121	19,895	20,338	20,257	20,448	21,532
Agricultural economics	2,071	2,043	2,109	2,095	2,065	2,051	2,017	2,063	2,087
Anthropology	1,724	1,652	1,511	1,533	1,456	1,484	1,561	1,588	1,654
Economics (except agricultural)	4,373	4,489	4,165	3,979	3,965	3,994	3,869	3,697	3,876
Geography	1,109	1,135	1,066	1,056	1,017	1,097	1,171	1,137	1,294
History and philosophy of science	62	69	68	65	59	72	74	91	87
Linguistics	675	640	676	714	658	763	835	812	874
Political science	5,412	5,347	5,431	5,541	5,578	5,703	5,604	5,812	6,043
Sociology	2,449	2,350	2,224	2,151	2,179	2,219	2,294	2,354	2,478
Sociology/anthropology	284	310	290	276	274	303	301	344	373
Social sciences, n.e.c.	3,110	2,708	2,617	2,711	2,644	2,652	2,531	2,550	2,766
Total, health fields	10,117	10,336	9,621	9,766	10,106	10,103	10,276	10,982	11,688
Dentistry	165	179	157	184	184	194	197	223	239
Neurology	92	90	89	110	116	122	139	180	184
Nursing	3,086	3,285	3,463	3,480	3,449	3,582	3,503	3,814	4,197
Pharmaceutical sciences	868	858	810	777	804	842	777	825	919
Preventive medicine/community health	2,190	2,054	2,093	2,079	2,155	1,912	2,091	2,181	2,238
Speech pathology/audiology	2,454	2,545	1,671	1,712	1,795	1,777	1,499	1,630	1,636
Veterinary sciences	422	413	414	494	569	567	670	694	733
Clinical medicine, n.e.c.	425	473	407	384	390	393	365	394	455
Health related, n.e.c.	415	439	517	546	644	714	1,035	1,041	1,087

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

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Table B-58. Male science/engineering graduate students in land-grant institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	82,943	84,312	86,366	86,623	87,865	90,676	90,818	91,126	92,110
Total, science/engineering fields	79,959	81,366	83,718	84,009	84,983	87,992	87,900	88,104	89,108
Engineering, total	24,252	25,892	27,825	27,529	28,260	30,441	30,843	30,957	31,540
Aerospace	682	695	918	897	966	1,022	1,036	1,102	1,177
Agricultural	689	748	829	806	775	850	850	852	844
Biomedical	238	240	256	258	272	331	374	370	400
Chemical	2,373	2,488	2,600	2,495	2,465	2,476	2,462	2,328	2,360
Civil	4,514	4,618	4,949	4,990	4,919	5,024	4,894	5,066	5,075
Electrical	5,682	6,214	6,910	7,089	7,674	8,289	8,775	8,799	9,017
Engineering science	500	514	568	548	593	774	746	729	809
Industrial	2,026	2,163	1,894	1,964	2,291	2,516	2,451	2,364	2,568
Mechanical	3,859	4,273	4,844	5,012	4,898	5,363	5,551	5,608	5,457
Metallurgical/materials	1,171	1,138	1,208	1,341	1,393	1,477	1,450	1,480	1,607
Mining	191	211	268	247	245	277	265	247	219
Nuclear	743	746	747	741	754	802	794	789	795
Petroleum	70	116	165	207	190	207	224	192	206
Engineering, n.e.c.	1,514	1,728	1,669	934	825	1,033	971	1,031	1,006
Sciences, total	55,707	55,474	55,893	56,480	56,723	57,551	57,057	57,147	57,568
Physical sciences	8,929	9,128	9,325	9,524	9,726	10,043	10,129	10,149	10,155
Astronomy	188	199	198	209	225	230	238	233	248
Chemistry	4,917	5,038	5,180	5,214	5,375	5,361	5,356	5,191	5,198
Physics	3,795	3,851	3,912	4,064	4,099	4,420	4,515	4,711	4,693
Physical sciences, n.e.c.	29	40	35	37	27	32	20	14	16
Earth, atmospheric, and ocean sciences	4,498	4,653	4,812	4,829	4,711	4,665	4,377	4,227	4,145
Atmospheric sciences	471	478	456	470	479	449	444	465	472
Geosciences	2,589	2,847	3,026	3,065	2,939	2,876	2,568	2,418	2,297
Oceanography	801	759	768	774	732	757	771	743	798
Earth, atm. & oc. sci., n.e.c.	637	569	562	520	561	583	594	601	578
Mathematical sciences	3,600	3,639	3,823	3,978	4,054	4,201	4,546	4,806	4,806
Computer sciences	2,989	3,267	3,679	4,088	4,656	4,889	5,102	5,144	5,315
Agricultural sciences	7,502	7,401	7,358	7,113	6,771	6,788	6,546	6,387	6,252
Biological sciences	11,913	11,484	11,421	11,362	11,448	11,398	11,209	11,217	11,300
Anatomy	218	192	194	191	173	161	168	185	201
Biochemistry	1,174	1,149	1,190	1,268	1,358	1,393	1,292	1,300	1,337
Biology	1,530	1,386	1,368	1,402	1,370	1,398	1,493	1,480	1,543
Biometry/epidemiology	54	67	59	55	67	104	74	83	69
Biophysics	101	92	84	86	122	135	147	136	167
Botany	1,808	1,833	1,715	1,667	1,632	1,661	1,498	1,520	1,515
Cell biology	203	257	277	307	340	384	464	483	509
Ecology	472	439	435	458	432	398	370	388	392
Entomology/parasitology	1,132	997	939	914	867	829	784	757	716
Genetics	296	267	299	303	337	349	351	338	331
Microbiology	1,115	1,105	1,154	1,144	1,245	1,149	1,158	1,221	1,155
Nutrition	1,172	1,174	1,110	1,097	1,123	1,116	1,100	1,029	1,022
Pathology	356	362	375	343	326	320	318	302	312
Pharmacology	483	485	530	510	499	497	480	518	533
Physiology	567	507	471	512	515	464	486	489	490
Zoology	1,086	1,016	1,061	973	899	863	869	810	812
Biosciences, n.e.c.	146	156	160	132	143	177	157	178	196
Psychology	3,044	3,038	3,025	3,033	3,098	3,082	2,766	2,884	2,930
Social sciences	13,232	12,864	12,450	12,553	12,259	12,405	12,382	12,333	12,665
Agricultural economics	1,641	1,617	1,663	1,645	1,595	1,583	1,542	1,570	1,561
Anthropology	836	813	705	698	653	649	688	692	699
Economics (except agricultural)	3,252	3,253	3,055	2,959	2,903	2,890	2,835	2,689	2,775
Geography	759	795	703	708	674	722	756	761	856
History and philosophy of science	40	44	46	41	41	50	51	63	57
Linguistics	303	279	282	282	275	331	368	358	395
Political science	3,376	3,336	3,276	3,448	3,404	3,468	3,452	3,460	3,516
Sociology	1,242	1,120	1,074	1,064	1,059	1,053	1,100	1,130	1,134
Sociology/anthropology	136	150	156	138	132	142	149	159	174
Social sciences, n.e.c.	1,647	1,457	1,490	1,570	1,523	1,517	1,441	1,451	1,498
Total, health fields	2,984	2,946	2,648	2,614	2,882	2,684	2,918	3,022	3,002
Dentistry	138	154	132	147	145	161	145	161	166
Neurology	65	62	68	65	67	72	86	106	110
Nursing	154	112	126	128	138	141	174	169	176
Pharmaceutical sciences	612	594	563	520	540	541	493	500	556
Preventive medicine/community health	853	771	767	745	761	698	847	881	786
Speech pathology/audiology	408	471	288	266	357	265	200	237	186
Veterinary sciences	263	264	266	309	355	349	412	414	423
Clinical medicine, n.e.c.	298	331	250	236	239	232	231	238	271
Health related, n.e.c.	193	187	188	198	280	225	330	316	328

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-59. Female science/engineering graduate students in land-grant institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	36,611	37,880	38,278	38,975	39,819	41,296	41,456	43,207	45,879
Total, science/engineering fields	29,478	30,490	31,305	31,823	32,595	33,877	34,098	35,247	37,193
Engineering, total	2,743	3,123	3,286	3,402	3,614	4,041	4,278	4,348	4,612
Aerospace	27	34	41	46	56	71	67	71	76
Agricultural	43	57	71	77	75	79	87	77	78
Biomedical	52	70	69	70	75	84	108	117	142
Chemical	287	358	362	356	349	365	427	414	427
Civil	721	753	836	840	893	910	891	979	972
Electrical	399	475	595	681	703	845	882	918	995
Engineering science	48	53	60	84	92	104	109	98	101
Industrial	541	562	415	446	482	532	546	472	571
Mechanical	265	322	338	353	369	441	489	530	514
Metallurgical/materials	147	175	195	203	267	308	338	333	353
Mining	12	20	26	23	15	19	22	22	23
Nuclear	56	50	56	65	74	88	86	89	111
Petroleum	5	5	32	18	11	6	15	10	6
Engineering, n.e.c.	140	189	190	140	153	189	211	218	243
Sciences, total	26,735	27,367	28,019	28,421	28,981	29,836	29,820	30,899	32,581
Physical sciences	1,845	2,025	2,191	2,259	2,376	2,546	2,646	2,810	2,922
Astronomy	32	43	46	48	52	57	48	54	58
Chemistry	1,391	1,542	1,676	1,703	1,740	1,888	1,943	2,078	2,147
Physics	401	422	448	478	562	581	634	660	700
Physical sciences, n.e.c.	21	18	21	30	22	20	21	18	17
Earth, atmospheric, and ocean sciences	1,359	1,451	1,526	1,500	1,584	1,582	1,508	1,500	1,593
Atmospheric sciences	79	84	77	78	85	106	96	89	102
Geosciences	745	811	914	899	943	866	812	779	756
Oceanography	297	296	288	300	328	350	334	335	406
Earth, atm. & oc. sci., n.e.c.	238	260	247	223	228	260	266	297	329
Mathematical sciences	1,171	1,283	1,368	1,483	1,565	1,675	1,750	1,845	1,980
Computer sciences	963	1,079	1,179	1,305	1,403	1,369	1,276	1,325	1,271
Agricultural sciences	2,272	2,451	2,462	2,456	2,362	2,362	2,375	2,407	2,478
Biological sciences	7,353	7,468	7,634	7,753	7,775	8,056	8,068	8,221	8,555
Anatomy	139	141	148	151	138	137	142	157	152
Biochemistry	589	642	683	718	772	844	816	864	879
Biology	877	898	950	940	974	952	985	1,031	1,138
Biometry/epidemiology	50	52	65	53	56	95	74	70	89
Biophysics	29	28	31	24	33	29	26	31	42
Botany	916	988	963	990	1,006	944	961	941	924
Cell biology	100	114	117	146	158	231	285	320	364
Ecology	211	219	215	227	227	231	220	231	244
Entomology/parasitology	290	312	325	312	303	319	281	300	313
Genetics	222	250	239	236	218	271	296	265	274
Microbiology	806	772	841	852	859	849	871	919	956
Nutrition	1,705	1,619	1,593	1,627	1,597	1,630	1,582	1,574	1,579
Pathology	187	194	206	184	196	193	209	182	203
Pharmacology	256	272	304	324	316	334	341	326	405
Physiology	287	293	292	298	330	343	347	340	353
Zoology	590	565	536	551	482	509	505	507	479
Biosciences, n.e.c.	99	109	126	120	110	145	127	163	161
Psychology	3,735	3,731	3,952	4,097	4,280	4,313	4,322	4,676	4,915
Social sciences	8,037	7,879	7,707	7,568	7,636	7,933	7,875	8,115	8,867
Agricultural economics	430	426	446	450	470	468	475	493	526
Anthropology	888	839	806	835	803	835	873	896	955
Economics (except agricultural)	1,121	1,236	1,110	1,020	1,062	1,104	1,034	1,008	1,101
Geography	350	340	363	348	343	375	415	376	438
History and philosophy of science	22	25	22	24	18	22	23	28	30
Linguistics	372	361	394	432	383	432	467	454	479
Political science	2,036	2,011	2,155	2,093	2,174	2,235	2,152	2,352	2,527
Sociology	1,207	1,230	1,150	1,087	1,120	1,166	1,194	1,224	1,344
Sociology/anthropology	148	160	134	138	142	161	152	185	199
Social sciences, n.e.c.	1,463	1,251	1,127	1,141	1,121	1,135	1,090	1,099	1,268
Total, health fields	7,133	7,390	6,973	7,152	7,224	7,419	7,358	7,960	8,686
Dentistry	27	25	25	37	39	33	52	62	73
Neurology	27	28	21	45	49	50	53	74	74
Nursing	2,932	3,173	3,337	3,352	3,311	3,441	3,329	3,645	4,021
Pharmaceutical sciences	256	264	247	257	264	301	284	325	363
Preventive medicine/community health	1,337	1,283	1,326	1,334	1,394	1,214	1,244	1,300	1,452
Speech pathology/audiology	2,046	2,074	1,383	1,446	1,438	1,512	1,299	1,393	1,450
Veterinary sciences	159	149	148	185	214	218	258	280	310
Clinical medicine, n.e.c.	127	142	157	148	151	161	134	156	184
Health related, n.e.c.	222	252	329	348	364	489	705	725	759

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-60. Full-time science/engineering graduate students in land-grant institutions field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	96,320	96,875	98,985	100,604	101,141	105,413	105,887	107,272	109,469
Total, science/engineering fields	89,242	90,055	92,204	93,653	94,005	98,331	98,788	99,770	101,749
Engineering, total	21,252	22,447	23,717	24,251	24,473	26,580	26,982	27,481	27,938
Aerospace	608	657	774	726	783	848	886	969	1,047
Agricultural	622	688	715	713	685	770	819	786	757
Biomedical	245	252	250	278	305	368	441	400	419
Chemical	2,340	2,536	2,617	2,529	2,449	2,535	2,628	2,457	2,512
Civil	4,369	4,509	4,822	4,836	4,744	4,959	4,807	5,043	4,956
Electrical	4,724	4,941	5,530	5,876	6,100	6,687	6,876	7,133	7,409
Engineering science	360	370	387	352	360	462	415	391	426
Industrial	1,740	1,763	1,330	1,392	1,464	1,600	1,563	1,562	1,683
Mechanical	3,301	3,632	4,133	4,222	4,215	4,651	4,843	5,006	4,899
Metallurgical/materials	1,198	1,183	1,261	1,380	1,487	1,599	1,612	1,621	1,782
Mining	178	200	242	242	223	266	243	238	188
Nuclear	701	706	710	702	722	749	727	739	754
Petroleum	60	111	197	219	184	194	216	175	197
Engineering, n.e.c.	806	899	749	784	752	892	906	961	909
Sciences, total	67,990	67,608	68,487	69,402	69,532	71,751	71,806	72,289	73,811
Physical sciences	10,011	10,309	10,647	10,932	11,113	11,626	11,901	11,987	12,100
Astronomy	208	228	230	237	259	269	278	280	303
Chemistry	5,846	6,026	6,297	6,399	6,477	6,666	6,782	6,729	6,788
Physics	3,912	4,004	4,072	4,234	4,341	4,656	4,804	4,951	4,983
Physical sciences, n.e.c.	45	51	48	62	36	35	37	27	26
Earth, atmospheric, and ocean sciences	4,857	5,029	5,273	5,157	4,960	5,013	4,618	4,446	4,512
Atmospheric sciences	471	499	463	469	510	496	486	509	516
Geosciences	2,900	3,053	3,361	3,327	3,129	3,046	2,707	2,526	2,433
Oceanography	875	882	876	861	795	892	874	883	1,034
Earth, atm. & oc. sci., n.e.c.	611	595	573	500	526	579	551	528	529
Mathematical sciences	4,138	4,255	4,439	4,612	4,831	5,100	5,531	5,744	5,933
Computer sciences	2,763	3,073	3,459	3,7[illegible]	4,466	4,762	4,828	4,697	4,823
Agricultural sciences	8,353	8,188	8,100	7,970	7,526	7,648	7,546	7,464	7,281
Biological sciences	16,907	16,420	16,557	16,760	16,603	17,049	17,049	17,135	17,600
Anatomy	304	291	303	292	266	263	276	306	329
Biochemistry	1,693	1,681	1,770	1,897	2,057	2,125	2,039	2,089	2,135
Biology	2,056	1,977	2,001	2,054	1,964	2,010	2,096	2,122	2,334
Biometry/epidemiology	100	94	102	92	103	153	126	130	145
Biophysics	128	111	108	104	147	158	164	164	203
Botany	2,386	2,473	2,387	2,345	2,243	2,284	2,140	2,155	2,121
Cell biology	298	364	377	430	486	579	706	761	824
Ecology	627	606	596	634	623	591	546	573	582
Entomology/parasitology	1,268	1,145	1,126	1,093	1,010	986	917	923	895
Genetics	501	488	512	522	534	599	620	562	579
Microbiology	1,671	1,569	1,713	1,759	1,821	1,746	1,830	1,904	1,860
Nutrition	2,372	2,266	2,139	2,188	2,171	2,253	2,188	2,064	2,066
Pathology	427	414	425	391	380	405	460	435	451
Pharmacology	705	704	780	774	756	781	775	792	876
Physiology	752	688	692	750	763	740	766	745	788
Zoology	1,450	1,339	1,284	1,220	1,110	1,135	1,181	1,128	1,116
Biosciences, n.e.c.	169	210	242	215	169	241	219	282	296
Psychology	5,453	5,421	5,332	5,470	5,519	5,693	5,609	5,848	5,972
Social sciences	15,508	14,913	14,680	14,735	14,514	14,860	14,724	14,968	15,590
Agricultural economics	1,879	1,813	1,896	1,869	1,807	1,788	1,703	1,736	1,737
Anthropology	1,304	1,235	1,148	1,182	1,080	1,175	1,199	1,274	1,279
Economics (except agricultural)	3,510	3,637	3,452	3,240	3,238	3,198	3,125	3,057	3,188
Geography	894	892	848	844	845	895	948	903	984
History and philosophy of science	54	63	58	51	50	62	64	80	72
Linguistics	617	580	604	633	587	670	744	731	770
Political science	2,950	2,889	2,927	3,152	3,198	3,191	3,118	3,267	3,482
Sociology	1,898	1,746	1,740	1,743	1,716	1,854	1,866	1,928	1,948
Sociology/anthropology	227	258	237	219	215	219	222	255	275
Social sciences, n.e.c.	2,175	1,800	1,770	1,802	1,778	1,808	1,735	1,737	1,855
Total, health fields	7,078	6,820	6,781	6,951	7,136	7,082	7,099	7,502	7,720
Dentistry	155	157	144	177	171	180	188	201	213
Neurology	92	89	87	109	115	120	138	177	172
Nursing	1,845	1,781	1,805	1,784	1,721	1,732	1,684	1,795	1,862
Pharmaceutical sciences	756	752	693	673	693	721	687	721	784
Preventive medicine/community health	1,834	1,652	1,713	1,724	1,714	1,595	1,637	1,696	1,613
Speech pathology/audiology	1,389	1,364	1,335	1,389	1,450	1,431	1,219	1,322	1,334
Veterinary sciences	316	326	313	370	456	460	552	566	616
Clinical medicine, n.e.c.	360	403	342	333	353	337	316	343	400
Health related, n.e.c.	331	296	349	392	463	506	678	681	726

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table B-61. Full-time science/engineering graduate students in land-grant institutions by type and source of major support: 1981-89

Type and source of major support	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all types:									
Total, all sources	96,320	96,875	98,985	100,604	101,141	105,413	105,887	107,272	109,469
Federal, total	22,553	21,088	20,829	21,027	21,830	22,858	24,408	25,032	25,855
Dept of Defense	2,174	2,198	2,515	2,638	2,518	2,880	3,379	3,653	3,766
Dept of HHS, total	6,037	5,438	5,133	5,269	5,784	5,795	6,057	6,410	6,413
NIH	4,027	3,767	3,797	3,827	3,881	4,125	4,521	4,778	4,866
Other HHS	2,010	1,671	1,336	1,442	1,903	1,670	1,536	1,632	1,547
NSF	4,466	4,521	4,627	4,744	4,901	5,226	5,573	5,660	5,908
All other Federal	9,876	8,931	8,554	8,376	8,627	8,957	9,399	9,309	9,768
Institutional support	38,787	40,037	41,392	43,197	43,530	46,359	46,903	47,614	49,292
Other outside support, total	10,596	11,256	11,390	11,223	12,129	11,884	11,170	11,286	11,461
All other U.S.	6,442	7,023	7,381	7,475	8,773	8,474	7,970	8,208	8,667
Foreign	4,154	4,233	4,009	3,748	3,356	3,410	3,200	3,078	2,794
Self-support	24,384	24,494	25,374	25,157	23,652	24,312	23,406	23,340	22,861
Fellowships:									
Total, all sources	7,674	7,707	7,405	7,547	7,932	8,160	7,720	7,898	8,736
Federal, total	1,708	1,696	1,615	1,737	1,873	1,963	1,814	1,880	2,156
Dept of Defense	46	48	59	86	84	102	141	148	185
Dept of HHS, total	327	281	223	272	298	279	238	245	246
NIH	224	214	160	209	195	184	150	161	161
Other HHS	103	67	63	63	103	95	88	84	85
NSF	561	551	551	581	613	652	622	706	795
All other Federal	774	816	782	798	878	930	813	781	930
Institutional support	2,920	2,795	2,846	2,907	3,333	3,388	3,497	3,737	4,110
Other outside support, total	3,046	3,216	2,944	2,903	2,726	2,809	2,409	2,281	2,470
All other U.S.	1,390	1,531	1,470	1,482	1,530	1,589	1,344	1,232	1,472
Foreign	1,656	1,685	1,474	1,421	1,196	1,220	1,065	1,049	998
Self-support	0	0	0	0	0	0	0	0	0
Traineeships:									
Total, all sources	5,339	4,715	4,376	4,397	4,406	4,310	4,151	4,173	4,002
Federal, total	3,790	3,062	2,768	2,738	2,899	2,706	2,689	2,733	2,647
Dept of Defense	18	22	63	45	12	20	62	80	69
Dept of HHS, total	3,009	2,621	2,240	2,248	2,452	2,326	2,251	2,352	2,097
NIH	1,423	1,353	1,290	1,188	1,123	1,128	1,220	1,203	1,175
Other HHS	1,586	1,268	950	1,060	1,329	1,198	1,031	1,149	922
NSF	49	31	31	9	9	9	23	14	25
All other Federal	714	388	434	436	426	351	353	287	456
Institutional support	1,121	1,217	1,130	1,213	1,085	1,199	1,062	1,078	1,032
Other outside support, total	428	436	478	446	422	405	400	362	323
All other U.S.	313	305	344	331	303	329	286	277	266
Foreign	115	131	134	115	119	76	114	85	57
Self-support	0	0	0	0	0	0	0	0	0
Research assistantships:									
Total, all sources	28,266	28,374	28,990	30,091	31,625	33,850	35,629	37,116	39,184
Federal, total	15,798	15,226	15,378	15,151	15,637	16,709	18,408	18,970	19,736
Dept of Defense	1,764	1,814	2,061	2,058	1,948	2,180	2,775	3,033	3,104
Dept of HHS, total	2,598	2,429	2,538	2,617	2,896	3,060	3,368	3,649	3,908
NIH	2,299	2,126	2,256	2,320	2,470	2,725	2,997	3,274	3,392
Other HHS	299	303	282	297	426	335	371	375	516
NSF	3,797	3,889	4,014	4,036	4,171	4,466	4,833	4,865	5,013
All other Federal	7,639	7,094	6,765	6,440	6,622	7,003	7,432	7,423	7,711
Institutional support	8,633	9,064	9,012	10,209	10,155	11,760	11,894	12,297	13,374
Other outside support, total	3,835	4,084	4,600	4,731	5,833	5,381	5,327	5,849	6,074
All other U.S.	3,412	3,677	4,210	4,334	5,496	5,013	4,933	5,446	5,661
Foreign	423	407	390	397	337	368	394	403	413
Self-support	0	0	0	0	0	0	0	0	0
Teaching assistantships:									
Total, all sources	23,969	24,980	26,123	26,727	27,142	27,639	27,950	28,076	28,468
Federal, total	154	110	137	112	186	169	184	246	225
Dept of Defense	0	0	0	0	0	0	0	0	0
Dept of HHS, total	22	29	21	14	35	34	87	57	61
NIH	18	14	19	11	17	20	67	52	57
Other HHS	4	15	2	3	18	14	20	5	4
NSF	6	5	4	7	10	9	8	19	25
All other Federal	126	76	112	91	141	126	89	170	139
Institutional support	23,678	24,661	25,828	26,419	26,824	27,370	27,641	27,724	28,110
Other outside support, total	137	209	158	196	132	100	125	106	133
All other U.S.	137	209	158	196	132	100	125	106	133
Foreign	0	0	0	0	0	0	0	0	0
Self-support	0	0	0	0	0	0	0	0	0
Other types of support:									
Total, all sources	31,072	31,099	32,091	31,842	30,036	31,454	30,437	30,009	29,079
Federal, total	1,103	994	931	1,289	1,235	1,311	1,313	1,203	1,091
Dept of Defense	346	314	332	449	474	578	401	392	408
Dept of HHS, total	81	78	111	118	103	96	113	107	101
NIH	63	60	72	99	76	68	87	88	81
Other HHS	18	18	39	19	27	28	26	19	20
NSF	53	45	27	111	98	90	87	56	50
All other Federal	623	557	461	611	560	547	712	648	532
Institutional support	2,435	2,300	2,576	2,449	2,133	2,642	2,809	2,778	2,666
Other outside support, total	3,150	3,311	3,210	2,947	3,016	3,189	2,909	2,688	2,461
All other U.S.	1,190	1,301	1,199	1,132	1,312	1,443	1,282	1,147	1,135
Foreign	1,960	2,010	2,011	1,815	1,704	1,746	1,627	1,541	1,326
Self-support	24,384	24,494	25,374	25,157	23,652	24,312	23,406	23,340	22,861

SOURCE: National Science Foundation, SRS

Table B-62. Part-time science/engineering graduate students in land-grant institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	23,234	25,317	25,659	24,994	26,543	26,559	26,387	27,061	28,520
Total, science/engineering fields	20,195	21,801	22,819	22,179	23,573	23,538	23,210	23,581	24,552
Engineering, total	5,743	6,568	7,394	6,680	7,401	7,902	8,139	7,824	8,214
Aerospace	101	72	185	217	239	245	217	204	206
Agricultural	110	117	185	170	165	159	118	143	165
Biomedical	45	58	75	50	42	47	41	87	123
Chemical	320	310	345	322	365	306	261	285	275
Civil	866	862	963	994	1,068	975	978	1,002	1,091
Electrical	1,357	1,748	1,975	1,894	2,277	2,447	2,781	2,584	2,603
Engineering science	188	197	241	280	325	416	440	436	484
Industrial	827	962	979	1,018	1,309	1,448	1,434	1,274	1,456
Mechanical	823	963	1,049	1,143	1,052	1,153	1,197	1,132	1,072
Metallurgical/materials	120	130	142	164	173	186	176	192	178
Mining	25	31	52	28	37	30	44	31	54
Nuclear	98	90	93	104	106	141	153	139	152
Petroleum	15	10	0	6	17	19	23	27	15
Engineering, n.e.c.	848	1,018	1,110	290	226	330	276	288	340
Sciences, total	14,452	15,233	15,425	15,499	16,172	15,636	15,071	15,757	16,338
Physical sciences	763	844	869	851	989	963	874	972	977
Astronomy	12	14	14	20	18	18	8	7	3
Chemistry	462	554	559	518	638	583	517	540	557
Physics	284	269	288	308	320	345	345	420	410
Physical sciences, n.e.c.	5	7	8	5	13	17	4	5	7
Earth, atmospheric, and ocean sciences	1,000	1,075	1,065	1,172	1,335	1,234	1,267	1,281	1,226
Atmospheric sciences	79	63	70	79	54	59	54	45	58
Geosciences	434	605	579	637	753	696	673	671	620
Oceanography	223	173	180	213	265	215	231	195	170
Earth, atm. & oc. sci., n.e.c.	264	234	236	243	263	264	309	370	378
Mathematical sciences	633	667	752	849	788	856	765	907	853
Computer sciences	1,189	1,273	1,399	1,627	1,593	1,496	1,550	1,772	1,763
Agricultural sciences	1,421	1,664	1,720	1,599	1,607	1,502	1,375	1,330	1,449
Biological sciences	2,359	2,532	2,498	2,355	2,620	2,405	2,228	2,303	2,255
Anatomy	53	42	39	50	45	35	34	36	24
Biochemistry	70	110	103	89	73	112	69	75	81
Biology	351	307	317	288	380	340	382	389	347
Biometry/epidemiology	4	25	22	16	20	46	22	23	13
Biophysics	2	9	7	6	8	6	9	3	6
Botany	338	348	291	312	395	321	319	306	318
Cell biology	5	7	17	23	12	36	43	42	49
Ecology	56	52	54	51	36	38	44	46	54
Entomology/parasitology	154	164	138	133	160	162	148	134	134
Genetics	17	29	26	17	21	21	27	41	26
Microbiology	250	308	282	237	283	252	199	236	251
Nutrition	505	527	564	536	549	493	494	539	535
Pathology	116	142	156	136	142	108	67	49	64
Pharmacology	34	53	54	60	59	50	46	52	62
Physiology	102	112	71	60	82	67	67	84	55
Zoology	226	242	313	304	271	237	193	189	175
Biosciences, n.e.c.	76	55	44	37	84	81	65	59	61
Psychology	1,326	1,348	1,645	1,660	1,859	1,702	1,479	1,712	1,873
Social sciences	5,761	5,830	5,477	5,386	5,381	5,478	5,533	5,480	5,942
Agricultural economics	192	230	213	226	258	263	314	327	350
Anthropology	420	417	363	351	376	309	362	314	375
Economics (except agricultural)	863	852	713	739	727	796	744	640	688
Geography	215	243	218	212	172	202	223	234	310
History and philosophy of science	8	6	10	14	9	10	10	11	15
Linguistics	58	60	72	81	71	93	91	81	104
Political science	2,462	2,458	2,504	2,389	2,380	2,512	2,486	2,545	2,561
Sociology	551	604	484	408	463	365	428	426	530
Sociology/anthropology	57	52	53	57	59	84	79	89	98
Social sciences, n.e.c.	935	908	847	909	866	844	796	813	911
Total, health fields	3,039	3,516	2,840	2,815	2,970	3,021	3,177	3,480	3,968
Dentistry	10	22	13	7	13	14	9	22	26
Neurology	0	1	2	1	1	2	1	3	12
Nursing	1,241	1,504	1,658	1,696	1,728	1,850	1,819	2,019	2,335
Pharmaceutical sciences	112	106	117	104	111	121	90	104	135
Preventive medicine/community health	356	402	380	355	441	317	454	485	625
Speech pathology/audiology	1,065	1,181	336	323	345	346	280	308	302
Veterinary sciences	106	87	101	124	113	107	118	128	117
Clinical medicine, n.e.c.	65	70	65	51	37	56	49	51	55
Health related, n.e.c.	84	143	168	154	181	208	357	360	361

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-1. Science/engineering graduate students in doctorate-granting institutions by enrollment status and field: 1975-89

Year	Total, all surveyed fields	Sciences							
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	291,947	203,808	24,906	11,060	14,668	7,365	10,072	41,714	27,832	66,191
1976	295,526	207,053	25,190	11,845	15,016	7,563	10,601	42,737	29,013	65,088
1977	303,448	208,424	25,180	12,403	14,093	7,829	10,947	44,032	28,994	64,946
1978	299,971	204,010	24,714	12,243	13,194	8,329	11,088	43,116	27,903	63,423
1979	312,816	211,420	25,042	12,624	13,265	9,680	11,294	43,054	28,806	67,655
1980	322,846	216,481	25,387	12,788	13,622	11,350	11,579	42,758	29,976	69,021
1981	329,702	217,613	25,793	13,115	14,030	13,149	11,373	42,062	29,890	68,201
1982	336,221	220,677	26,511	13,804	14,770	15,583	11,596	41,916	29,997	66,500
1983	343,071	220,425	27,747	14,281	14,885	18,306	11,538	41,609	30,011	62,048
1984	346,431	220,483	28,410	14,286	15,067	20,366	11,327	41,963	30,033	59,031
1985	356,022	226,080	29,312	14,217	15,268	23,823	10,680	42,490	30,490	59,800
1986	367,163	230,124	30,543	13,989	15,663	25,204	10,675	43,369	30,656	60,025
1987	372,461	233,585	30,967	13,368	16,221	26,083	10,339	43,648	31,451	61,508
1988	377,674	237,380	31,212	12,871	16,944	26,742	10,302	44,636	32,403	62,270
1989	385,025	241,861	31,744	12,641	16,996	26,588	10,367	45,788	33,501	64,236
	Full time									
1975	206,797	153,130	21,450	9,050	10,147	4,164	8,512	35,162	20,267	44,378
1976	210,117	156,385	21,743	9,735	10,379	4,449	9,040	36,001	22,025	43,013
1977	212,576	156,636	21,868	10,065	9,864	4,258	9,296	36,501	21,750	43,034
1978	209,380	152,341	21,495	9,997	9,296	4,426	9,259	35,956	20,705	41,207
1979	216,801	156,015	21,844	10,186	9,152	5,130	9,371	35,987	21,287	43,058
1980	223,012	158,739	22,252	10,315	9,360	5,900	9,591	35,851	22,178	43,292
1981	226,921	159,948	22,612	10,543	9,688	6,472	9,656	35,504	22,245	43,228
1982	229,993	160,330	23,339	10,918	10,178	7,911	9,519	35,248	21,900	41,317
1983	236,076	162,860	24,502	11,497	10,316	9,276	9,420	35,234	22,150	40,465
1984	237,460	162,659	25,147	11,266	10,613	10,108	9,323	35,688	21,600	38,914
1985	241,605	165,514	25,938	10,871	11,160	12,374	8,721	35,696	21,334	39,420
1986	250,470	170,139	27,069	10,862	11,727	13,389	8,852	36,609	21,995	39,636
1987	254,865	172,578	27,652	10,097	12,364	13,639	8,611	37,223	22,558	40,434
1988	259,848	175,604	27,778	9,837	12,840	13,701	8,588	38,244	23,308	41,308
1989	267,554	180,825	28,396	9,665	13,111	14,088	8,568	39,461	24,727	42,809
	Part time									
1975	85,150	50,678	3,456	2,010	4,521	3,201	1,560	6,552	7,565	21,813
1976	85,409	50,668	3,447	2,110	4,637	3,114	1,561	6,736	6,988	22,075
1977	90,872	51,788	3,312	2,338	4,229	3,571	1,651	7,531	7,244	21,912
1978	90,591	51,669	3,219	2,246	3,898	3,903	1,829	7,160	7,198	22,216
1979	96,015	55,405	3,198	2,438	4,113	4,550	1,923	7,067	7,519	24,597
1980	99,834	57,742	3,135	2,473	4,262	5,450	1,988	6,907	7,798	25,729
1981	102,781	57,665	3,181	2,572	4,342	6,677	1,717	6,558	7,645	24,973
1982	106,228	60,347	3,172	2,886	4,592	7,672	2,077	6,668	8,097	25,183
1983	106,995	57,565	3,245	2,784	4,569	9,030	2,118	6,375	7,861	21,583
1984	108,971	57,824	3,263	3,020	4,454	10,258	2,004	6,275	8,433	20,117
1985	114,417	60,566	3,374	3,346	4,108	11,449	1,959	6,794	9,156	20,380
1986	116,693	59,985	3,474	3,127	3,936	11,815	1,823	6,760	8,661	20,389
1987	117,596	61,007	3,315	3,271	3,857	12,444	1,728	6,425	8,893	21,074
1988	117,826	61,776	3,434	3,034	4,104	13,041	1,714	6,392	9,095	20,962
1989	117,471	61,036	3,348	2,976	3,885	12,500	1,799	6,327	8,774	21,427

Continued on next page.

Table C-1. Science/engineering graduate students in doctorate-granting institutions by enrollment status and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	65,184	1,636	5,236	11,924	15,808	11,135	8,167	2,313	8,965	22,955
1976	63,484	1,449	5,466	11,353	15,409	10,180	7,935	2,333	9,359	24,989
1977	65,042	1,496	5,456	11,863	16,538	9,834	8,198	2,491	9,166	29,982
1978	64,269	1,450	5,611	11,920	16,478	8,967	8,122	2,487	9,234	31,692
1979	67,511	1,476	5,870	12,360	16,881	10,114	8,602	2,656	9,552	33,885
1980	69,906	1,730	6,283	12,547	18,126	9,067	9,155	2,839	10,159	36,459
1981	74,388	1,876	6,782	13,316	18,900	9,188	9,913	3,047	11,366	37,701
1982	78,193	1,933	7,509	13,546	20,582	9,008	10,767	3,030	11,818	37,351
1983	85,324	2,376	8,076	14,429	23,545	8,794	12,089	3,338	12,677	37,322
1984	87,115	2,413	7,928	14,752	24,599	8,940	12,966	3,572	11,945	38,833
1985	90,239	2,626	7,767	14,438	26,375	10,110	13,246	3,818	11,859	39,703
1986	95,794	2,891	7,617	14,494	27,940	11,108	14,607	4,039	13,098	41,245
1987	97,002	3,086	7,780	13,864	29,028	11,747	15,090	4,187	12,220	41,874
1988	96,738	3,281	7,243	14,151	29,778	10,910	15,050	4,164	12,161	43,556
1989	96,998	3,438	6,963	14,133	30,358	10,510	14,905	4,424	12,267	46,166
	Full time									
1975	37,166	1,225	3,718	7,196	8,219	4,064	4,879	1,780	6,085	16,501
1976	36,325	1,153	3,988	6,901	8,092	3,489	4,874	1,853	5,975	17,407
1977	36,783	1,178	4,150	7,261	8,353	3,228	4,797	1,941	5,875	19,157
1978	37,057	1,135	4,226	7,459	8,334	3,140	4,868	1,961	5,934	19,982
1979	39,440	1,151	4,513	7,772	8,857	3,626	5,346	2,120	6,055	21,346
1980	41,948	1,324	4,792	8,119	9,693	3,576	5,730	2,236	6,478	22,325
1981	44,828	1,480	5,311	8,819	10,156	3,432	6,337	2,436	6,857	22,145
1982	48,698	1,519	5,994	9,438	11,277	3,590	7,128	2,453	7,299	20,965
1983	52,690	1,825	6,397	9,917	12,854	3,142	8,178	2,686	7,691	20,526
1984	53,974	1,840	6,258	10,230	13,461	3,276	8,511	2,863	7,535	20,827
1985	54,817	1,980	6,045	9,860	14,358	3,355	8,683	3,070	7,466	21,274
1986	59,031	2,138	6,093	10,092	15,832	3,718	9,599	3,317	8,242	21,300
1987	60,352	2,355	6,251	9,613	16,457	4,073	9,966	3,370	8,267	21,935
1988	61,520	2,517	5,900	9,870	17,012	4,184	10,198	3,398	8,441	22,724
1989	62,379	2,688	5,722	9,840	17,560	4,499	10,115	3,657	8,298	24,350
	Part time									
1975	28,018	411	1,518	4,728	7,589	7,071	3,288	533	2,880	6,454
1976	27,159	296	1,478	4,452	7,317	6,691	3,061	480	3,384	7,582
1977	28,259	318	1,306	4,602	8,185	6,606	3,401	550	3,291	10,825
1978	27,212	315	1,385	4,461	8,144	5,827	3,254	526	3,300	11,710
1979	28,071	325	1,357	4,588	8,024	6,488	3,256	536	3,497	12,539
1980	27,958	406	1,491	4,428	8,433	5,491	3,425	603	3,681	14,134
1981	29,560	396	1,471	4,497	8,744	5,756	3,576	611	4,509	15,556
1982	29,495	414	1,515	4,108	9,305	5,418	3,639	577	4,519	16,386
1983	32,634	551	1,679	4,512	10,691	5,652	3,911	652	4,986	16,796
1984	33,141	573	1,670	4,522	11,138	5,664	4,455	709	4,410	18,006
1985	35,422	646	1,722	4,578	12,017	6,755	4,563	748	4,393	18,429
1986	36,763	753	1,524	4,402	12,108	7,390	5,008	722	4,856	19,945
1987	36,650	731	1,529	4,251	12,571	7,674	5,124	817	3,953	19,939
1988	35,218	764	1,343	4,281	12,766	6,726	4,852	766	3,720	20,832
1989	34,619	750	1,241	4,293	12,798	6,011	4,790	767	3,969	21,816

SOURCE: National Science Foundation, SRS

Table C-2. Science/engineering graduate students in doctorate-granting institutions by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	291,947	203,808	24,906	11,060	14,668	7,365	10,072	41,714	27,832	66,191
1976	295,526	207,053	25,190	11,845	15,016	7,563	10,601	42,737	29,013	65,088
1977	303,448	208,424	25,180	12,403	14,093	7,829	10,947	44,032	28,994	64,946
1978	299,971	204,010	24,714	12,243	13,194	8,329	11,088	43,116	27,903	63,423
1979	312,816	211,420	25,042	12,624	13,265	9,680	11,294	43,054	28,806	67,655
1980	322,846	216,481	25,387	12,788	13,622	11,350	11,579	42,758	29,976	69,021
1981	329,702	217,613	25,793	13,115	14,030	13,149	11,373	42,062	29,890	68,201
1982	336,221	220,677	26,511	13,804	14,770	15,583	11,596	41,916	29,997	66,500
1983	343,071	220,425	27,747	14,281	14,885	18,306	11,538	41,609	30,011	62,048
1984	346,431	220,483	28,410	14,286	15,067	20,366	11,327	41,963	30,033	59,031
1985	356,022	226,080	29,312	14,217	15,268	23,823	10,680	42,490	30,490	59,800
1986	367,163	230,124	30,543	13,989	15,663	25,204	10,675	43,369	30,656	60,025
1987	372,461	233,585	30,967	13,368	16,221	26,083	10,339	43,648	31,451	61,508
1988	377,674	237,380	31,212	12,871	16,944	26,742	10,302	44,636	32,403	62,270
1989	385,025	241,861	31,744	12,641	16,996	26,588	10,367	45,788	33,501	64,236
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	218,749	147,145	21,524	10,317	10,674	6,510	8,964	29,237	15,908	44,011
1978 1/.....	210,985	141,006	20,933	9,935	9,953	6,818	8,860	27,922	14,568	42,017
1979	214,647	142,648	21,010	9,963	9,939	7,793	8,778	27,154	14,267	43,744
1980	217,604	143,189	21,172	9,879	10,162	8,880	8,862	26,473	14,338	43,423
1981	218,854	141,392	21,237	9,982	10,288	9,910	8,776	25,491	13,718	41,990
1982	221,118	141,532	21,589	10,378	10,658	11,448	8,726	24,719	13,228	40,786
1983	225,878	140,486	22,366	10,671	10,655	13,325	8,619	24,282	12,999	37,569
1984	227,506	140,683	22,736	10,740	10,833	15,065	8,418	24,406	12,648	35,837
1985	233,003	143,378	23,318	10,601	10,823	17,934	7,909	24,480	12,293	36,020
1986	239,539	145,423	24,199	10,344	11,072	19,272	7,908	24,718	12,005	35,905
1987	242,299	146,482	24,374	9,878	11,446	19,867	7,597	24,825	12,020	36,475
1988	241,927	146,796	24,254	9,390	11,985	20,246	7,457	24,987	12,011	36,466
1989	243,525	148,000	24,475	9,101	11,866	20,309	7,441	25,259	12,222	37,327
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	84,699	61,279	3,656	2,086	3,419	1,319	1,983	14,795	13,086	20,935
1978 1/.....	88,986	63,004	3,781	2,308	3,241	1,511	2,228	15,194	13,335	21,406
1979	98,169	68,772	4,032	2,661	3,326	1,887	2,516	15,900	14,539	23,911
1980	105,242	73,292	4,215	2,909	3,460	2,470	2,717	16,285	15,638	25,598
1981	110,848	76,221	4,556	3,133	3,742	3,239	2,597	16,571	16,172	26,211
1982	115,103	79,145	4,922	3,426	4,112	4,135	2,870	17,197	16,769	25,714
1983	117,193	79,939	5,381	3,610	4,230	4,981	2,919	17,327	17,012	24,479
1984	118,925	79,800	5,674	3,546	4,234	5,301	2,909	17,557	17,385	23,194
1985	123,019	82,702	5,994	3,616	4,445	5,889	2,771	18,010	18,197	23,780
1986	127,624	84,701	6,344	3,645	4,591	5,932	2,767	18,651	18,651	24,120
1987	130,162	87,103	6,593	3,490	4,775	6,216	2,742	18,823	19,431	25,033
1988	135,747	90,584	6,958	3,481	4,959	6,496	2,845	19,649	20,392	25,804
1989	141,500	93,861	7,269	3,540	5,130	6,279	2,926	20,529	21,279	26,909

See footnotes at end of table.

Table C-2. Science/engineering graduate students in doctorate-granting institutions by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	65,184	1,636	5,236	11,924	15,808	11,135	8,167	2,313	8,965	22,955
1976	63,484	1,449	5,466	11,353	15,409	10,180	7,935	2,333	9,359	24,989
1977	65,042	1,496	5,456	11,863	16,538	9,834	8,198	2,491	9,166	29,982
1978	64,269	1,450	5,611	11,920	16,478	8,967	8,122	2,487	9,234	31,692
1979	67,511	1,476	5,870	12,360	16,881	10,114	8,602	2,656	9,552	33,885
1980	69,906	1,730	6,283	12,547	18,126	9,067	9,155	2,839	10,159	36,459
1981	74,388	1,876	6,782	13,316	18,900	9,188	9,913	3,047	11,366	37,701
1982	78,193	1,933	7,509	13,546	20,582	9,008	10,767	3,030	11,818	37,351
1983	85,324	2,376	8,076	14,429	23,545	8,794	12,089	3,338	12,677	37,322
1984	87,115	2,413	7,928	14,752	24,599	8,940	12,966	3,572	11,945	38,833
1985	90,239	2,626	7,767	14,438	26,375	10,110	13,246	3,818	11,859	39,703
1986	95,794	2,891	7,617	14,494	27,940	11,108	14,607	4,039	13,098	41,245
1987	97,002	3,086	7,780	13,864	29,028	11,747	15,090	4,187	12,220	41,874
1988	96,738	3,281	7,243	14,151	29,778	10,910	15,050	4,164	12,161	43,556
1989	96,998	3,438	6,963	14,133	30,358	10,510	14,905	4,424	12,267	46,166
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	61,458	1,463	5,075	10,995	15,852	9,131	7,941	2,318	8,683	10,146
1978 1/.....	59,963	1,411	5,127	10,861	15,704	8,147	7,798	2,276	8,639	10,016
1979	61,991	1,427	5,248	11,038	15,981	8,946	8,167	2,383	8,801	10,008
1980	63,791	1,656	5,585	11,136	17,179	7,812	8,651	2,542	9,230	10,624
1981	67,056	1,809	5,983	11,691	17,701	7,744	9,314	2,671	10,143	10,406
1982	69,873	1,823	6,600	11,731	19,124	7,480	10,085	2,622	10,408	9,713
1983	76,047	2,252	7,023	12,523	21,637	7,323	11,325	2,903	11,061	9,345
1984	77,355	2,280	6,924	12,685	22,583	7,374	12,062	3,114	10,333	9,468
1985	79,800	2,459	6,728	12,282	24,142	8,398	12,304	3,246	10,241	9,825
1986	84,090	2,690	6,551	12,313	25,260	9,083	13,533	3,403	11,257	10,026
1987	84,946	2,863	6,598	11,854	26,220	9,568	13,922	3,502	10,419	10,871
1988	84,357	3,052	6,142	11,950	26,773	8,852	13,748	3,451	10,389	10,774
1989	84,251	3,197	5,931	11,822	27,218	8,457	13,622	3,656	10,348	11,274
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	3,584	33	381	868	686	703	257	173	483	19,836
1978 1/.....	4,306	39	484	1,059	774	820	324	211	595	21,676
1979	5,520	49	622	1,322	900	1,168	435	273	751	23,877
1980	6,115	74	698	1,411	947	1,255	504	297	929	25,835
1981	7,332	67	799	1,625	1,199	1,444	599	376	1,223	27,295
1982	8,320	110	909	1,815	1,458	1,528	682	408	1,410	27,638
1983	9,277	124	1,053	1,906	1,908	1,471	764	435	1,616	27,977
1984	9,760	133	1,004	2,067	2,016	1,566	904	458	1,612	29,365
1985	10,439	167	1,039	2,156	2,233	1,712	942	572	1,618	29,878
1986	11,704	201	1,066	2,181	2,680	2,025	1,074	636	1,841	31,219
1987	12,056	223	1,182	2,010	2,808	2,179	1,168	685	1,801	31,003
1988	12,381	229	1,101	2,201	3,005	2,058	1,302	713	1,772	32,782
1989	12,747	241	1,032	2,311	3,140	2,053	1,283	768	1,919	34,892

1/ Distribution by sex was not requested in 1978; totals represent estimates based on 1977 and 1979 data.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table C-3. Full-time science/engineering graduate students in doctorate-granting institutions by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	206,797	153,130	21,450	9,050	10,147	4,164	8,512	35,162	20,267	44,378
1976	210,117	156,385	21,743	9,735	10,379	4,449	9,040	36,001	22,025	43,013
1977	212,576	156,636	21,868	10,065	9,864	4,258	9,296	36,501	21,750	43,034
1978	209,380	152,341	21,495	9,997	9,296	4,426	9,259	35,956	20,705	41,207
1979	216,801	156,015	21,844	10,186	9,152	5,130	9,371	35,987	21,287	43,058
1980	223,012	158,739	22,252	10,315	9,360	5,900	9,591	35,851	22,178	43,292
1981	226,921	159,948	22,612	10,543	9,688	6,472	9,656	35,504	22,245	43,228
1982	229,993	160,330	23,339	10,918	10,178	7,911	9,519	35,248	21,900	41,317
1983	236,076	162,860	24,502	11,497	10,316	9,276	9,420	35,234	22,150	40,465
1984	237,460	162,659	25,147	11,266	10,613	10,108	9,323	35,688	21,600	38,914
1985	241,605	165,514	25,938	10,871	11,160	12,374	8,721	35,696	21,334	39,420
1986	250,470	170,139	27,069	10,862	11,727	13,389	8,852	36,609	21,995	39,636
1987	254,865	172,578	27,652	10,097	12,364	13,639	8,611	37,223	22,558	40,434
1988	259,848	175,604	27,778	9,837	12,840	13,701	8,588	38,244	23,308	41,308
1989	267,554	180,825	28,396	9,665	13,111	14,088	8,568	39,461	24,727	42,809
	Men									
1975	157,793	114,551	18,769	7,826	8,026	3,573	7,386	25,100	11,927	31,944
1976	155,195	113,740	18,802	8,173	8,098	3,755	7,618	24,896	12,579	29,819
1977	153,195	111,545	18,803	8,333	7,727	3,573	7,571	24,582	11,955	29,001
1978 1/.....	148,116	106,701	18,346	8,089	7,274	3,675	7,364	23,673	10,960	27,320
1979	150,372	107,202	18,501	8,034	7,153	4,213	7,260	23,139	10,833	28,069
1980	152,169	106,735	18,722	7,960	7,222	4,668	7,299	22,654	10,760	27,450
1981	153,309	106,106	18,797	8,057	7,327	5,003	7,402	22,126	10,352	27,042
1982	155,191	105,208	19,134	8,228	7,626	5,942	7,137	21,351	9,834	25,956
1983	159,936	106,477	19,867	8,645	7,650	7,066	7,039	21,186	9,840	25,184
1984	160,638	106,326	20,254	8,540	7,876	7,734	6,894	21,285	9,283	24,460
1985	163,056	107,936	20,745	8,154	8,191	9,747	6,466	21,129	8,879	24,625
1986	168,692	110,127	21,534	8,049	8,573	10,533	6,583	21,372	8,853	24,630
1987	171,208	110,838	21,853	7,500	9,047	10,787	6,363	21,582	8,846	24,860
1988	172,056	110,909	21,646	7,197	9,369	10,807	6,251	21,961	8,676	25,002
1989	175,011	112,904	21,952	7,010	9,378	11,244	6,177	22,367	9,040	25,736
	Women									
1975	49,004	38,579	2,681	1,224	2,121	591	1,126	10,062	8,340	12,434
1976	54,922	42,645	2,941	1,562	2,281	694	1,422	11,105	9,446	13,194
1977	59,381	45,091	3,065	1,732	2,137	685	1,725	11,919	9,795	14,033
1978 1/.....	61,264	45,640	3,149	1,908	2,022	751	1,895	12,283	9,745	13,887
1979	66,429	48,813	3,343	2,152	1,999	917	2,111	12,848	10,454	14,989
1980	70,843	52,004	3,530	2,355	2,138	1,232	2,292	13,197	11,418	15,842
1981	73,612	53,842	3,815	2,486	2,361	1,469	2,254	13,378	11,893	16,186
1982	74,802	55,122	4,205	2,690	2,552	1,969	2,382	13,897	12,066	15,361
1983	76,140	56,383	4,635	2,852	2,666	2,210	2,381	14,048	12,310	15,281
1984	76,822	56,333	4,893	2,726	2,737	2,374	2,429	14,403	12,317	14,454
1985	78,549	57,578	5,193	2,717	2,969	2,627	2,255	14,567	12,455	14,795
1986	81,778	60,012	5,535	2,813	3,154	2,856	2,269	15,237	13,142	15,006
1987	83,657	61,740	5,799	2,597	3,317	2,852	2,248	15,641	13,712	15,574
1988	87,792	64,695	6,132	2,640	3,471	2,894	2,337	16,283	14,632	16,306
1989	92,543	67,921	6,444	2,655	3,733	2,844	2,391	17,094	15,687	17,073

See footnotes at end of table.

Table C-3. Full-time science/engineering graduate students in doctorate-granting institutions by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	37,166	1,225	3,718	7,196	8,219	4,064	4,879	1,780	6,085	16,501
1976	36,325	1,153	3,988	6,901	8,092	3,489	4,874	1,853	5,975	17,407
1977	36,783	1,178	4,150	7,261	8,353	3,228	4,797	1,941	5,875	19,157
1978	37,057	1,135	4,226	7,459	8,334	3,140	4,868	1,961	5,934	19,982
1979	39,440	1,151	4,513	7,772	8,857	3,626	5,346	2,120	6,055	21,346
1980	41,948	1,324	4,792	8,119	9,693	3,576	5,730	2,236	6,478	22,325
1981	44,828	1,480	5,311	8,819	10,156	3,432	6,337	2,436	6,857	22,145
1982	48,698	1,519	5,994	9,438	11,277	3,590	7,128	2,453	7,299	20,965
1983	52,690	1,825	6,397	9,917	12,854	3,142	8,178	2,686	7,691	20,526
1984	53,974	1,840	6,258	10,230	13,461	3,276	8,511	2,863	7,535	20,827
1985	54,817	1,980	6,045	9,860	14,358	3,355	8,683	3,070	7,466	21,274
1986	59,031	2,138	6,093	10,092	15,832	3,718	9,599	3,317	8,242	21,300
1987	60,352	2,355	6,251	9,613	16,457	4,073	9,966	3,370	8,267	21,935
1988	61,520	2,517	5,900	9,870	17,012	4,184	10,198	3,398	8,441	22,724
1989	62,379	2,688	5,722	9,840	17,560	4,499	10,115	3,657	8,298	24,350
	Men									
1975	35,296	1,205	3,552	6,762	7,991	3,586	4,767	1,681	5,752	7,946
1976	34,330	1,130	3,746	6,403	7,796	3,111	4,754	1,746	5,644	7,125
1977	34,455	1,151	3,864	6,626	7,976	2,855	4,660	1,801	5,522	7,195
1978 1/......	34,291	1,105	3,874	6,667	7,935	2,710	4,688	1,794	5,510	7,124
1979	35,958	1,115	4,060	6,774	8,407	3,061	5,091	1,908	5,542	7,212
1980	38,025	1,270	4,304	7,086	9,149	2,932	5,416	2,006	5,862	7,409
1981	40,188	1,429	4,749	7,585	9,464	2,761	5,994	2,152	6,054	7,015
1982	43,454	1,446	5,301	8,081	10,480	2,850	6,704	2,148	6,444	6,529
1983	47,145	1,745	5,576	8,524	11,937	2,554	7,708	2,366	6,735	6,314
1984	47,977	1,754	5,485	8,692	12,355	2,671	7,963	2,511	6,546	6,335
1985	48,599	1,854	5,258	8,282	13,204	2,739	8,137	2,638	6,487	6,521
1986	52,105	1,990	5,278	8,499	14,419	2,995	8,983	2,810	7,131	6,460
1987	53,223	2,190	5,346	8,188	14,976	3,349	9,263	2,821	7,090	7,147
1988	54,059	2,351	5,087	8,301	15,403	3,460	9,386	2,838	7,233	7,088
1989	54,447	2,508	4,914	8,193	15,838	3,640	9,285	3,035	7,034	7,660
	Women									
1975	1,870	20	166	434	228	478	112	99	333	8,555
1976	1,995	23	242	498	296	378	120	107	331	10,282
1977	2,328	27	286	635	377	373	137	140	353	11,962
1978 1/......	2,766	30	352	792	399	422	180	167	424	12,858
1979	3,482	36	453	998	450	565	255	212	513	14,134
1980	3,923	54	488	1,033	544	644	314	230	616	14,916
1981	4,640	51	562	1,234	692	671	343	284	803	15,130
1982	5,244	73	693	1,357	797	740	424	305	855	14,436
1983	5,545	80	821	1,393	917	588	470	320	956	14,212
1984	5,997	86	773	1,538	1,106	605	548	352	989	14,492
1985	6,218	126	787	1,578	1,154	616	546	432	979	14,753
1986	6,926	148	815	1,593	1,413	723	616	507	1,111	14,840
1987	7,129	165	905	1,425	1,481	724	703	549	1,177	14,788
1988	7,461	166	813	1,569	1,609	724	812	560	1,208	15,636
1989	7,932	180	808	1,647	1,722	859	830	622	1,264	16,690

1/ Distribution by sex was not requested in 1978; totals represent estimates based on 1977 and 1979 data.

SOURCE: National Science Foundation, SRS

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Table C-4. Full-time science/engineering graduate students in doctorate-granting institutions by citizenship and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	206,797	153,130	21,450	9,050	10,147	4,164	8,512	35,162	20,267	44,378
1976	210,117	156,385	21,743	9,735	10,379	4,449	9,040	36,001	22,025	43,013
1977	212,576	156,636	21,868	10,065	9,864	4,258	9,296	36,501	21,750	43,034
1978	209,380	152,341	21,495	9,997	9,296	4,426	9,259	35,956	20,705	41,207
1979	216,801	156,015	21,844	10,186	9,152	5,130	9,371	35,987	21,287	43,058
1980	223,012	158,739	22,252	10,315	9,360	5,900	9,591	35,851	22,178	43,292
1981	226,921	159,948	22,612	10,543	9,688	6,472	9,656	35,504	22,245	43,228
1982	229,993	160,330	23,339	10,918	10,178	7,911	9,519	35,248	21,900	41,317
1983	236,076	162,860	24,502	11,497	10,316	9,276	9,420	35,234	22,150	40,465
1984	237,460	162,659	25,147	11,266	10,613	10,108	9,323	35,688	21,600	38,914
1985	241,605	165,514	25,938	10,871	11,160	12,374	8,721	35,696	21,334	39,420
1986	250,470	170,139	27,069	10,862	11,727	13,389	8,852	36,609	21,995	39,636
1987	254,865	172,578	27,652	10,097	12,364	13,639	8,611	37,223	22,558	40,434
1988	259,848	175,604	27,778	9,837	12,840	13,701	8,588	38,244	23,308	41,308
1989	267,554	180,825	28,396	9,665	13,111	14,088	8,568	39,461	24,727	42,809
	U.S. citizens									
1975 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	189,437	139,290	18,419	9,359	7,576	4,369	7,884	33,121	20,860	37,702
1980	174,534	129,750	16,665	8,977	6,209	4,030	7,432	31,497	21,110	33,830
1981	174,467	128,785	16,531	9,076	6,162	4,266	7,367	30,853	21,386	33,144
1982	174,836	128,154	17,047	9,313	6,457	5,139	7,237	30,371	20,964	31,626
1983	176,607	127,884	17,458	9,842	6,236	5,763	7,046	29,889	21,214	30,436
1984	176,565	126,571	17,719	9,716	6,266	6,109	7,019	30,065	20,676	29,001
1985	175,919	125,769	17,685	9,236	6,509	7,481	6,436	29,492	20,302	28,628
1986	177,961	126,639	17,778	9,000	6,776	7,943	6,372	29,560	20,964	28,246
1987	178,779	126,567	17,856	8,157	7,071	7,929	6,064	29,312	21,469	28,709
1988	178,955	126,514	17,529	7,695	7,250	7,671	6,045	29,330	22,098	28,896
1989	184,166	129,726	17,541	7,383	7,326	7,765	6,104	29,610	23,495	30,502
	Foreign students									
1975 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 1/......	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	27,364	16,725	3,425	827	1,576	761	1,487	2,866	427	5,356
1980	48,478	28,989	5,587	1,338	3,151	1,870	2,159	4,354	1,068	9,462
1981	52,454	31,163	6,081	1,467	3,526	2,206	2,289	4,651	859	10,084
1982	55,157	32,176	6,292	1,605	3,721	2,772	2,282	4,877	936	9,691
1983	59,469	34,976	7,044	1,655	4,080	3,513	2,374	5,345	936	10,029
1984	60,895	36,088	7,428	1,550	4,347	3,999	2,304	5,623	924	9,913
1985	65,686	39,745	8,253	1,635	4,651	4,893	2,285	6,204	1,032	10,792
1986	72,509	43,500	9,291	1,862	4,951	5,446	2,480	7,049	1,031	11,390
1987	76,086	46,011	9,796	1,940	5,293	5,710	2,547	7,911	1,089	11,725
1988	80,893	49,090	10,249	2,142	5,590	6,030	2,543	8,914	1,210	12,412
1989	83,388	51,099	10,855	2,282	5,785	6,323	2,464	9,851	1,232	12,307

See footnotes at end of table.

Table C-4. Full-time science/engineering graduate students in doctorate-granting institutions by citizenship and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	37,166	1,225	3,718	7,196	8,219	4,064	4,879	1,780	6,085	16,501
1976	36,325	1,153	3,988	6,901	8,092	3,489	4,874	1,853	5,975	17,407
1977	36,783	1,178	4,150	7,261	8,353	3,228	4,797	1,941	5,875	19,157
1978	37,057	1,135	4,226	7,459	8,334	3,140	4,868	1,961	5,934	19,982
1979	39,440	1,151	4,513	7,772	8,857	3,626	5,346	2,120	6,055	21,346
1980	41,948	1,324	4,792	8,119	9,693	3,576	5,730	2,236	6,478	22,325
1981	44,828	1,480	5,311	8,819	10,156	3,432	6,337	2,436	6,857	22,145
1982	48,698	1,519	5,994	9,438	11,277	3,590	7,128	2,453	7,299	20,965
1983	52,690	1,825	6,397	9,917	12,854	3,142	8,178	2,686	7,691	20,526
1984	53,974	1,840	6,258	10,230	13,461	3,276	8,511	2,863	7,535	20,827
1985	54,817	1,980	6,045	9,860	14,358	3,355	8,683	3,070	7,466	21,274
1986	59,031	2,138	6,093	10,092	15,832	3,718	9,599	3,317	8,242	21,300
1987	60,352	2,355	6,251	9,613	16,457	4,073	9,966	3,370	8,267	21,935
1988	61,520	2,517	5,900	9,870	17,012	4,184	10,198	3,398	8,441	22,724
1989	62,379	2,688	5,722	9,840	17,560	4,499	10,115	3,657	8,298	24,350
	U.S. citizens									
1975 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	30,025	822	3,277	5,987	7,149	2,738	3,820	1,452	4,780	20,122
1980	24,442	759	2,631	4,821	5,530	2,206	3,150	1,136	4,209	20,342
1981	25,624	882	2,953	5,220	5,542	1,931	3,328	1,330	4,438	20,058
1982	27,881	944	3,417	5,496	6,268	2,060	3,684	1,280	4,732	18,801
1983	30,451	1,078	3,910	5,660	7,191	1,834	4,247	1,520	5,011	18,272
1984	31,367	1,104	3,878	5,803	7,679	1,867	4,509	1,659	4,868	18,627
1985	31,319	1,249	3,616	5,409	7,943	1,803	4,778	1,794	4,727	18,831
1986	32,623	1,332	3,677	5,406	8,372	1,983	5,126	1,824	4,903	18,699
1987	32,961	1,547	3,651	5,065	8,643	2,099	5,409	1,786	4,761	19,251
1988	32,695	1,491	3,180	5,115	8,960	2,179	5,195	1,764	4,811	19,746
1989	33,266	1,689	2,862	5,052	9,418	2,359	5,483	1,851	4,552	21,174
	Foreign students									
1975 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1978 1/.....	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1979	9,415	329	1,236	1,785	1,708	888	1,526	668	1,275	1,224
1980	17,506	565	2,161	3,298	4,163	1,370	2,580	1,100	2,269	1,983
1981	19,204	598	2,358	3,599	4,614	1,501	3,009	1,106	2,419	2,087
1982	20,817	575	2,577	3,942	5,009	1,530	3,444	1,173	2,567	2,164
1983	22,239	747	2,487	4,257	5,663	1,308	3,931	1,166	2,680	2,254
1984	22,607	736	2,380	4,427	5,782	1,409	4,002	1,204	2,667	2,200
1985	23,498	731	2,429	4,451	6,415	1,552	3,905	1,276	2,739	2,443
1986	26,408	806	2,416	4,686	7,460	1,735	4,473	1,493	3,339	2,601
1987	27,391	808	2,600	4,548	7,814	1,974	4,557	1,584	3,506	2,684
1988	28,825	1,026	2,720	4,755	8,052	2,005	5,003	1,634	3,630	2,978
1989	29,113	999	2,860	4,788	8,142	2,140	4,632	1,806	3,746	3,176

1/ Distribution by citizenship was not requested before 1979.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table C-5. Part-time science/engineering graduate students in doctorate-granting institutions by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmos-pheric and ocean sciences	Mathe-matical sciences	Computer sciences	Agri-cultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	85,150	50,678	3,456	2,010	4,521	3,201	1,560	6,552	7,565	21,813
1976	85,409	50,668	3,447	2,110	4,637	3,114	1,561	6,736	6,988	22,075
1977	90,872	51,788	3,312	2,338	4,229	3,571	1,651	7,531	7,244	21,912
1978	90,591	51,669	3,219	2,246	3,898	3,903	1,829	7,160	7,198	22,216
1979	96,015	55,405	3,198	2,438	4,113	4,550	1,923	7,067	7,519	24,597
1980	99,834	57,742	3,135	2,473	4,262	5,450	1,988	6,907	7,798	25,729
1981	102,781	57,665	3,181	2,572	4,342	6,677	1,717	6,558	7,645	24,973
1982	106,228	60,347	3,172	2,886	4,592	7,672	2,077	6,668	8,097	25,183
1983	106,995	57,565	3,245	2,784	4,569	9,030	2,118	6,375	7,861	21,583
1984	108,971	57,824	3,263	3,020	4,454	10,258	2,004	6,275	8,433	20,117
1985	114,417	60,566	3,374	3,346	4,108	11,449	1,959	6,794	9,156	20,380
1986	116,693	59,985	3,474	3,127	3,936	11,815	1,823	6,760	8,661	20,389
1987	117,596	61,007	3,315	3,271	3,857	12,444	1,728	6,425	8,893	21,074
1988	117,826	61,776	3,434	3,034	4,104	13,041	1,714	6,392	9,095	20,962
1989	117,471	61,036	3,348	2,976	3,885	12,500	1,799	6,327	8,774	21,427
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	65,554	35,600	2,721	1,984	2,947	2,937	1,393	4,655	3,953	15,010
1978 1/......	62,869	34,305	2,587	1,846	2,679	3,143	1,496	4,249	3,608	14,697
1979	64,275	35,446	2,509	1,929	2,786	3,580	1,518	4,015	3,434	15,675
1980	65,435	36,454	2,450	1,919	2,940	4,212	1,563	3,819	3,578	15,973
1981	65,545	35,286	2,440	1,925	2,961	4,907	1,374	3,365	3,366	14,948
1982	65,927	36,324	2,455	2,150	3,032	5,506	1,589	3,368	3,394	14,830
1983	65,942	34,009	2,499	2,026	3,005	6,259	1,580	3,096	3,159	12,385
1984	66,868	34,357	2,482	2,200	2,957	7,331	1,524	3,121	3,365	11,377
1985	69,947	35,442	2,573	2,447	2,632	8,187	1,443	3,351	3,414	11,395
1986	70,847	35,296	2,665	2,295	2,499	8,739	1,325	3,346	3,152	11,275
1987	71,091	35,644	2,521	2,378	2,399	9,080	1,234	3,243	3,174	11,615
1988	69,871	35,887	2,608	2,193	2,616	9,439	1,206	3,026	3,335	11,464
1989	68,514	35,096	2,523	2,091	2,488	9,065	1,264	2,892	3,182	11,591
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	25,318	16,188	591	354	1,282	634	258	2,876	3,291	6,902
1978 1/......	27,722	17,364	632	400	1,219	760	333	2,911	3,590	7,519
1979	31,740	19,959	689	509	1,327	970	405	3,052	4,085	8,922
1980	34,399	21,288	685	554	1,322	1,238	425	3,088	4,220	9,756
1981	37,236	22,379	741	647	1,381	1,770	343	3,193	4,279	10,025
1982	40,301	24,023	717	736	1,560	2,166	488	3,300	4,703	10,353
1983	41,053	23,556	746	758	1,564	2,771	538	3,279	4,702	9,198
1984	42,103	23,467	781	820	1,497	2,927	480	3,154	5,068	8,740
1985	44,470	25,124	801	899	1,476	3,262	516	3,443	5,742	8,985
1986	45,846	24,689	809	832	1,437	3,076	498	3,414	5,509	9,114
1987	46,505	25,363	794	893	1,458	3,364	494	3,182	5,719	9,459
1988	47,955	25,889	826	841	1,488	3,602	508	3,366	5,760	9,498
1989	48,957	25,940	825	885	1,397	3,435	535	3,435	5,592	9,836

See footnotes at end of table.

Table C-5. Part-time science/engineering graduate students in doctorate-granting institutions by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	28,018	411	1,518	4,728	7,589	7,071	3,288	533	2,880	6,454
1976	27,159	296	1,478	4,452	7,317	6,691	3,061	480	3,384	7,582
1977	28,259	318	1,306	4,602	8,185	6,606	3,401	550	3,291	10,825
1978	27,212	315	1,385	4,461	8,144	5,827	3,254	526	3,300	11,710
1979	28,071	325	1,357	4,588	8,024	6,488	3,256	536	3,497	12,539
1980	27,958	406	1,491	4,428	8,433	5,491	3,425	603	3,681	14,134
1981	29,560	396	1,471	4,497	8,744	5,756	3,576	611	4,509	15,556
1982	29,495	414	1,515	4,108	9,305	5,418	3,639	577	4,519	16,386
1983	32,634	551	1,679	4,512	10,691	5,652	3,911	652	4,986	16,796
1984	33,141	573	1,670	4,522	11,138	5,664	4,455	709	4,410	18,006
1985	35,422	646	1,722	4,578	12,017	6,755	4,563	748	4,393	18,429
1986	36,763	753	1,524	4,402	12,108	7,390	5,008	722	4,856	19,945
1987	36,650	731	1,529	4,251	12,571	7,674	5,124	817	3,953	19,939
1988	35,218	764	1,343	4,281	12,766	6,726	4,852	766	3,720	20,832
1989	34,619	750	1,241	4,293	12,798	6,011	4,790	767	3,969	21,816
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	27,003	312	1,211	4,369	7,876	6,276	3,281	517	3,161	2,951
1978 1/......	25,672	306	1,253	4,194	7,769	5,429	3,110	482	3,129	2,892
1979	26,033	312	1,188	4,264	7,574	5,885	3,076	475	3,259	2,796
1980	25,766	386	1,281	4,050	8,030	4,880	3,235	536	3,368	3,215
1981	26,868	380	1,234	4,106	8,237	4,983	3,320	519	4,089	3,391
1982	26,419	377	1,299	3,650	8,644	4,630	3,381	474	3,964	3,184
1983	28,902	507	1,447	3,999	9,700	4,769	3,617	537	4,326	3,031
1984	29,378	526	1,439	3,993	10,228	4,703	4,099	603	3,787	3,133
1985	31,201	605	1,470	4,000	10,938	5,659	4,167	608	3,754	3,304
1986	31,985	700	1,273	3,814	10,841	6,088	4,550	593	4,126	3,566
1987	31,723	673	1,252	3,666	11,244	6,219	4,659	681	3,329	3,724
1988	30,298	701	1,055	3,649	11,370	5,392	4,362	613	3,156	3,686
1989	29,804	689	1,017	3,629	11,380	4,817	4,337	621	3,314	3,614
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1977	1,256	6	95	233	309	330	120	33	130	7,874
1978 1/......	1,540	9	132	267	375	398	144	44	171	8,818
1979	2,038	13	169	324	450	603	180	61	238	9,743
1980	2,192	20	210	378	403	611	190	67	313	10,919
1981	2,692	16	237	391	507	773	256	92	420	12,165
1982	3,076	37	216	458	661	788	258	103	555	13,202
1983	3,732	44	232	513	991	883	294	115	660	13,765
1984	3,763	47	231	529	910	961	356	106	623	14,873
1985	4,221	41	252	578	1,079	1,096	396	140	639	15,125
1986	4,778	53	251	588	1,267	1,302	458	129	730	16,379
1987	4,927	58	277	585	1,327	1,455	465	136	624	16,215
1988	4,920	63	288	632	1,396	1,334	490	153	564	17,146
1989	4,815	61	224	664	1,418	1,194	453	146	655	18,202

1/ Distribution by sex was not requested in 1978; totals represent estimates based on 1977 and 1979 data.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table C-6. Science/engineering graduate students in doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	329,702	336,221	343,071	346,431	356,022	367,163	372,461	377,674	385,025
Total, science/engineering fields	292,001	298,870	305,749	307,598	316,319	325,918	330,587	334,118	338,859
Engineering, total	74,388	78,193	85,324	87,115	90,239	95,794	97,002	96,738	96,998
Aerospace	1,876	1,933	2,376	2,413	2,626	2,891	3,086	3,281	3,438
Agricultural	802	875	969	954	941	1,054	1,063	1,039	1,031
Biomedical	1,012	1,064	1,185	1,288	1,317	1,481	1,613	1,676	1,853
Chemical	6,264	6,929	7,352	7,196	7,015	6,891	6,990	6,532	6,312
Civil	13,316	13,546	14,429	14,752	14,438	14,494	13,864	14,151	14,133
Electrical	18,900	20,582	23,545	24,599	26,375	27,940	29,028	29,778	30,358
Engineering science	1,753	1,840	1,981	1,900	1,838	2,128	2,127	2,189	2,073
Industrial	9,188	9,008	8,794	8,940	10,110	11,108	11,747	10,910	10,510
Mechanical	9,913	10,767	12,089	12,966	13,246	14,607	15,090	15,050	14,905
Metallurgical/materials	3,047	3,030	3,338	3,572	3,818	4,039	4,187	4,164	4,424
Mining	444	424	498	477	463	487	484	450	419
Nuclear	1,283	1,301	1,203	1,234	1,220	1,265	1,279	1,303	1,323
Petroleum	518	580	724	732	752	726	790	711	651
Engineering, n.e.c.	6,072	6,314	6,841	6,092	6,080	6,683	5,654	5,504	5,568
Sciences, total	217,613	220,677	220,425	220,483	226,080	230,124	233,585	237,380	241,861
Physical sciences	25,793	26,511	27,747	28,410	29,312	30,543	30,967	31,212	31,744
Astronomy	597	632	618	639	671	689	722	731	789
Chemistry	15,254	15,793	16,548	16,599	17,152	17,602	17,667	17,482	17,683
Physics	9,867	10,015	10,512	10,985	11,297	12,014	12,330	12,787	13,083
Physical sciences, n.e.c.	75	71	69	187	192	238	248	212	189
Earth, atmospheric, and ocean sciences	13,115	13,804	14,281	14,286	14,217	13,989	13,368	12,871	12,641
Atmospheric sciences	873	877	884	895	951	956	948	929	900
Geosciences	8,289	9,048	9,688	9,716	9,533	9,176	8,385	7,904	7,537
Oceanography	1,933	1,934	1,907	1,929	1,984	2,027	2,022	1,926	2,061
Earth, atm. & oc. sci., n.e.c.	2,020	1,945	1,802	1,746	1,749	1,830	2,013	2,112	2,143
Mathematical sciences	14,030	14,770	14,885	15,067	15,268	15,663	16,221	16,944	16,996
Computer sciences	13,149	15,583	18,306	20,366	23,823	25,204	26,083	26,742	26,588
Agricultural sciences	11,373	11,596	11,538	11,327	10,680	10,675	10,339	10,302	10,367
Biological sciences	42,062	41,916	41,609	41,963	42,490	43,369	43,648	44,636	45,788
Anatomy	1,072	1,074	1,037	1,029	993	973	1,027	1,068	1,109
Biochemistry	4,022	4,090	4,194	4,460	4,657	4,876	4,803	4,926	5,130
Biology	10,209	9,888	9,551	9,536	9,551	9,768	9,624	9,792	10,101
Biometry/epidemiology	1,182	1,166	1,156	1,004	1,360	1,441	1,506	1,631	1,677
Biophysics	463	440	450	433	441	547	591	592	655
Botany	3,457	3,602	3,405	3,371	3,307	3,242	3,095	3,039	2,960
Cell biology	1,018	1,143	1,182	1,256	1,429	1,716	1,978	2,083	2,215
Ecology	1,048	1,018	962	1,034	978	956	899	963	1,037
Entomology/parasitology	1,664	1,540	1,475	1,438	1,342	1,306	1,244	1,240	1,181
Genetics	887	940	986	1,012	1,075	1,219	1,273	1,247	1,321
Microbiology	3,889	3,992	4,137	4,229	4,342	4,280	4,397	4,744	4,793
Nutrition	4,143	4,124	4,093	4,023	4,005	3,987	3,976	3,927	3,917
Pathology	1,404	1,413	1,419	1,424	1,308	1,333	1,386	1,343	1,371
Pharmacology	2,013	2,073	2,134	2,117	2,179	2,157	2,153	2,209	2,347
Physiology	2,144	2,058	1,994	2,160	2,211	2,220	2,213	2,220	2,206
Zoology	2,584	2,471	2,390	2,266	2,103	2,065	2,097	2,022	2,075
Biosciences, n.e.c.	863	884	1,044	1,171	1,209	1,283	1,386	1,590	1,693
Psychology	29,890	29,997	30,011	30,033	30,490	30,656	31,451	32,403	33,501
Social sciences	68,201	66,500	62,048	59,031	59,800	60,025	61,508	62,270	64,236
Agricultural economics	2,235	2,223	2,237	2,212	2,200	2,184	2,152	2,209	2,227
Anthropology	5,805	5,688	5,399	5,371	5,398	5,582	5,598	5,700	5,942
Economics (except agricultural)	12,407	12,652	12,015	11,512	11,391	11,252	11,257	11,341	11,431
Geography	2,744	2,718	2,640	2,604	2,542	2,591	2,702	2,638	2,842
History and philosophy of science	248	256	253	274	272	266	294	288	314
Linguistics	3,010	2,674	2,813	2,920	2,804	2,819	2,920	2,881	2,919
Political science	24,072	23,855	22,496	20,358	21,458	21,868	22,497	22,422	23,314
Sociology	7,050	6,670	6,376	6,122	6,002	5,901	6,330	6,452	6,658
Sociology/anthropology	1,021	1,042	1,014	960	906	904	882	912	946
Social sciences, n.e.c.	9,609	8,722	6,805	6,698	6,827	6,658	6,876	7,427	7,643
Total, health fields	37,701	37,351	37,322	38,833	39,703	41,245	41,874	43,556	46,166
Dentistry	942	836	776	850	835	938	1,057	1,085	1,157
Neurology	177	190	247	303	324	373	472	591	681
Nursing	14,132	14,361	14,986	15,913	15,732	16,194	16,033	16,292	16,982
Pharmaceutical sciences	2,538	2,508	2,554	2,428	2,459	2,593	2,525	2,531	2,763
Preventive medicine/community health	7,130	6,676	6,492	6,657	7,106	7,039	7,359	7,529	7,605
Speech pathology/audiology	6,584	6,775	5,929	5,924	6,134	6,139	5,647	5,964	6,218
Veterinary sciences	458	446	440	531	610	607	711	735	782
Clinical medicine, n.e.c.	1,216	1,321	1,301	1,307	1,503	1,459	1,559	1,653	1,681
Health related, n.e.c.	4,524	4,238	4,597	4,920	5,000	5,903	6,511	7,176	8,297

Note: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-7. Science/engineering graduate students in doctorate-granting institutions by geographic distribution: 1981-89

Division and State	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all institutions	329,702	336,221	343,071	346,431	356,022	367,163	372,461	377,674	385,025
New England	25,069	25,633	26,509	26,560	27,437	28,204	28,208	28,984	28,356
Connecticut	3,570	3,663	3,772	3,648	3,930	4,121	4,317	4,341	4,394
Maine	395	416	509	580	523	538	614	649	667
Massachusetts	18,067	18,398	18,949	19,034	19,654	20,044	19,716	20,353	19,628
New Hampshire	733	782	794	803	829	878	882	973	986
Rhode Island	1,739	1,739	1,851	1,834	1,883	1,993	2,074	2,018	2,063
Vermont	565	635	634	661	618	630	605	650	618
Middle Atlantic	62,835	62,949	64,436	65,628	66,611	68,565	68,254	68,765	69,241
New Jersey	9,238	9,069	9,153	10,021	10,475	10,401	10,872	11,204	10,924
New York	37,399	37,673	38,455	38,842	39,092	40,609	39,949	39,933	40,214
Pennsylvania	16,198	16,207	16,828	16,765	17,044	17,555	17,433	17,628	18,103
East North Central	59,108	60,013	62,050	61,265	62,088	64,737	67,336	68,831	70,861
Illinois	15,809	15,828	16,344	16,547	17,263	17,840	18,664	18,982	19,406
Indiana	7,668	7,892	8,143	7,439	6,913	7,670	8,037	8,102	8,954
Michigan	11,781	12,151	12,547	12,643	12,806	13,519	13,813	13,836	14,687
Ohio	16,324	16,638	17,392	16,921	17,484	18,017	18,954	19,947	19,636
Wisconsin	7,526	7,504	7,624	7,715	7,622	7,691	7,868	7,964	8,178
West North Central	22,385	23,043	23,785	23,666	24,224	24,752	24,995	25,460	25,983
Iowa	4,080	4,367	4,627	4,517	4,651	4,810	4,818	5,005	4,971
Kansas	4,140	4,141	4,427	4,367	4,225	4,230	4,387	4,501	4,605
Minnesota	5,051	5,081	5,127	5,255	5,641	5,570	5,373	5,534	5,681
Missouri	5,345	5,643	5,655	5,680	5,811	6,224	6,408	6,296	6,536
Nebraska	2,184	2,133	2,214	2,165	2,139	2,130	2,238	2,326	2,329
North Dakota	913	946	946	906	949	970	915	947	950
South Dakota	672	732	789	776	808	818	856	851	911
South Atlantic	49,444	50,212	47,985	49,875	52,228	54,877	56,784	58,288	59,839
Delaware	1,135	1,173	1,180	1,112	1,150	1,189	1,303	1,198	1,218
District of Columbia	9,247	8,233	7,703	8,120	8,531	9,110	9,204	8,726	8,176
Florida	10,076	10,555	8,954	9,068	9,965	10,024	10,879	11,946	12,513
Georgia	5,513	5,659	5,683	6,290	6,005	6,386	6,726	6,749	6,902
Maryland	5,422	5,472	5,880	5,961	6,185	6,525	6,503	7,144	7,498
North Carolina	6,472	6,928	7,152	7,238	7,234	7,720	7,799	7,977	8,411
South Carolina	2,667	2,769	2,864	2,925	2,931	3,251	3,313	3,192	3,458
Virginia	6,584	6,779	6,901	7,508	8,612	9,097	9,571	9,768	10,051
West Virginia	2,328	2,644	1,668	1,653	1,615	1,575	1,486	1,588	1,612
East South Central	12,069	12,145	12,435	12,975	13,407	13,970	14,390	15,127	16,168
Alabama	3,068	2,979	3,042	3,382	3,759	4,089	4,472	4,718	5,095
Kentucky	2,717	2,788	2,808	2,871	2,779	2,783	2,935	3,099	3,215
Mississippi	1,761	1,882	2,001	2,200	2,172	2,250	2,255	2,389	2,507
Tennessee	4,523	4,496	4,584	4,522	4,697	4,848	4,728	4,921	5,351
West South Central	27,550	29,483	31,930	32,522	32,549	33,157	32,800	33,060	34,826
Arkansas	1,164	1,224	1,172	1,182	1,181	1,161	1,180	1,053	1,112
Louisiana	3,797	4,022	4,344	4,564	4,553	4,391	4,344	4,241	4,348
Oklahoma	3,332	3,507	3,849	3,813	3,924	4,027	4,291	4,090	4,250
Texas	19,257	20,730	22,565	22,963	22,891	23,578	22,985	23,676	25,116
Mountain	20,675	22,093	22,282	22,125	23,129	23,965	24,681	24,735	25,079
Arizona	5,344	6,140	6,147	6,212	6,743	6,834	6,938	7,254	7,239
Colorado	6,642	6,690	6,411	6,150	6,468	7,108	7,440	7,361	7,542
Idaho	913	937	1,004	1,008	1,041	1,035	1,173	1,225	1,405
Montana	810	976	1,019	1,030	980	911	891	941	971
Nevada	464	413	532	561	547	536	642	647	762
New Mexico	2,296	2,372	2,551	2,464	2,551	2,647	2,815	2,760	2,587
Utah	3,476	3,763	3,783	3,921	3,986	4,154	4,043	3,850	3,771
Wyoming	730	802	835	779	813	740	739	697	802
Pacific	48,733	48,650	49,399	49,379	51,797	52,416	52,715	52,127	52,295
Alaska	320	355	424	352	381	399	387	404	444
California	37,979	38,242	38,829	38,515	40,775	41,255	41,556	40,783	41,036
Hawaii	1,806	1,828	1,782	1,702	1,705	1,820	1,822	1,829	1,857
Oregon	2,943	2,981	3,093	3,234	3,262	3,429	3,454	3,580	3,588
Washington	5,685	5,244	5,271	5,576	5,674	5,513	5,496	5,531	5,370
Outlying Areas	1,834	2,000	2,260	2,436	2,552	2,520	2,298	2,297	2,377

SOURCE: National Science Foundation, SRS

Table C-8. Male science/engineering graduate students in doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	218,854	221,118	225,878	227,506	233,003	239,539	242,299	241,927	243,525
Total, science/engineering fields	208,448	211,405	216,533	218,038	223,178	229,513	231,428	231,153	232,251
Engineering, total	67,056	69,873	76,047	77,355	79,800	84,090	84,946	84,357	84,251
Aerospace	1,809	1,823	2,252	2,280	2,459	2,690	2,863	3,052	3,197
Agricultural	758	818	896	872	863	970	967	953	944
Biomedical	839	854	932	1,013	1,034	1,144	1,233	1,254	1,390
Chemical	5,517	6,062	6,371	6,252	6,037	5,871	5,857	5,476	5,308
Civil	11,691	11,731	12,523	12,685	12,282	12,313	11,854	11,950	11,822
Electrical	17,701	19,124	21,637	22,583	24,142	25,260	26,220	26,773	27,218
Engineering science	1,566	1,618	1,740	1,649	1,642	1,875	1,876	1,946	1,831
Industrial	7,744	7,480	7,323	7,374	8,398	9,083	9,568	8,852	8,457
Mechanical	9,314	10,085	11,325	12,062	12,304	13,533	13,922	13,748	13,622
Metallurgical/materials	2,671	2,622	2,903	3,114	3,246	3,403	3,502	3,451	3,656
Mining	407	386	456	437	436	453	445	410	379
Nuclear	1,199	1,215	1,119	1,146	1,113	1,142	1,151	1,176	1,182
Petroleum	466	538	652	672	691	680	741	666	623
Engineering, n.e.c.	5,374	5,517	5,918	5,216	5,153	5,673	4,747	4,650	4,622
Sciences, total	141,392	141,532	140,486	140,683	143,378	145,423	146,482	146,796	148,000
Physical sciences	21,237	21,589	22,366	22,736	23,318	24,199	24,374	24,254	24,475
Astronomy	506	531	526	541	563	568	602	591	649
Chemistry	11,801	12,024	12,441	12,340	12,765	12,975	12,920	12,432	12,420
Physics	8,887	8,987	9,356	9,755	9,867	10,514	10,717	11,111	11,299
Physical sciences, n.e.c.	43	47	43	100	123	142	135	120	107
Earth, atmospheric, and ocean sciences	9,982	10,378	10,671	10,740	10,601	10,344	9,878	9,390	9,101
Atmospheric sciences	749	754	756	759	796	777	780	766	725
Geosciences	6,352	6,866	7,309	7,377	7,213	6,960	6,364	5,971	5,695
Oceanography	1,414	1,415	1,390	1,387	1,409	1,396	1,426	1,323	1,397
Earth, atm. & oc. sci., n.e.c.	1,467	1,343	1,216	1,217	1,183	1,211	1,308	1,330	1,284
Mathematical sciences	10,288	10,658	10,655	10,833	10,823	11,072	11,446	11,985	11,866
Computer sciences	9,910	11,448	13,325	15,065	17,934	19,272	19,867	20,246	20,309
Agricultural sciences	8,776	8,726	8,619	8,418	7,909	7,908	7,597	7,457	7,441
Biological sciences	25,491	24,719	24,282	24,406	24,480	24,718	24,825	24,987	25,259
Anatomy	683	669	632	605	569	560	583	603	619
Biochemistry	2,684	2,607	2,637	2,801	2,929	3,000	2,916	2,941	3,089
Biology	6,316	5,960	5,591	5,588	5,516	5,599	5,622	5,570	5,648
Biometry/epidemiology	656	561	547	472	640	667	725	748	724
Biophysics	338	330	338	326	331	410	450	443	493
Botany	2,260	2,303	2,172	2,139	2,076	2,083	1,911	1,884	1,834
Cell biology	651	726	774	789	911	1,044	1,207	1,233	1,278
Ecology	709	663	643	714	638	602	555	597	632
Entomology/parasitology	1,308	1,158	1,090	1,066	992	948	906	881	817
Genetics	467	457	509	545	595	663	671	659	673
Microbiology	2,227	2,250	2,335	2,373	2,450	2,392	2,434	2,608	2,561
Nutrition	1,342	1,331	1,298	1,278	1,304	1,265	1,299	1,201	1,190
Pathology	860	832	855	846	763	792	804	796	799
Pharmacology	1,326	1,352	1,372	1,321	1,345	1,315	1,274	1,327	1,347
Physiology	1,452	1,367	1,297	1,388	1,375	1,366	1,378	1,357	1,313
Zoology	1,693	1,630	1,588	1,464	1,355	1,296	1,308	1,240	1,290
Biosciences, n.e.c.	519	523	604	691	691	716	782	899	952
Psychology	13,718	13,228	12,999	12,648	12,293	12,005	12,020	12,011	12,222
Social sciences	41,990	40,786	37,569	35,837	36,020	35,905	36,475	36,466	37,327
Agricultural economics	1,769	1,766	1,760	1,735	1,703	1,689	1,652	1,669	1,652
Anthropology	2,657	2,559	2,337	2,358	2,389	2,355	2,392	2,415	2,464
Economics (except agricultural)	9,479	9,482	9,150	8,769	8,614	8,479	8,456	8,428	8,385
Geography	1,895	1,890	1,764	1,776	1,717	1,770	1,802	1,786	1,888
History and philosophy of science	159	167	161	187	180	169	198	184	198
Linguistics	1,319	1,156	1,165	1,196	1,152	1,194	1,233	1,212	1,257
Political science	15,264	14,999	13,939	12,827	13,216	13,390	13,709	13,407	13,862
Sociology	3,481	3,145	3,046	2,856	2,836	2,709	2,888	2,971	3,072
Sociology/anthropology	499	502	505	474	443	436	429	404	415
Social sciences, n.e.c.	5,468	5,120	3,742	3,659	3,770	3,714	3,716	3,990	4,134
Total, health fields	10,406	9,713	9,345	9,468	9,825	10,026	10,871	10,774	11,274
Dentistry	716	676	607	664	648	731	776	791	813
Neurology	125	134	175	194	201	232	295	352	406
Nursing	655	625	614	643	640	606	928	688	750
Pharmaceutical sciences	1,790	1,744	1,720	1,577	1,599	1,659	1,543	1,501	1,629
Preventive medicine/community health	3,369	2,963	2,765	2,737	2,933	3,009	3,339	3,141	2,878
Speech pathology/audiology	1,004	1,050	922	912	986	822	662	728	654
Veterinary sciences	289	281	277	326	379	374	436	439	455
Clinical medicine, n.e.c.	745	815	744	711	744	745	822	860	919
Health related, n.e.c.	1,713	1,425	1,521	1,704	1,695	1,848	2,070	2,274	2,770

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-9. Female science/engineering graduate students in doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	110,848	115,103	117,193	118,925	123,019	127,624	130,162	135,747	141,500
Total, science/engineering fields	83,553	87,465	89,216	89,560	93,141	96,405	99,159	102,965	106,608
Engineering, total	7,332	8,320	9,277	9,760	10,439	11,704	12,056	12,381	12,747
Aerospace	67	110	124	133	167	201	223	229	241
Agricultural	44	57	73	82	78	84	96	86	87
Biomedical	173	210	253	275	283	337	380	422	463
Chemical	747	867	981	944	978	1,020	1,133	1,056	1,004
Civil	1,625	1,815	1,906	2,067	2,156	2,181	2,010	2,201	2,311
Electrical	1,199	1,458	1,908	2,016	2,233	2,680	2,808	3,005	3,140
Engineering science	187	222	241	251	196	253	251	243	242
Industrial	1,444	1,528	1,471	1,566	1,712	2,025	2,179	2,058	2,053
Mechanical	599	682	764	904	942	1,074	1,168	1,302	1,283
Metallurgical/materials	376	408	435	458	572	636	685	713	768
Mining	37	38	42	40	27	34	39	40	40
Nuclear	84	86	84	88	107	123	128	127	141
Petroleum	52	42	72	60	61	46	49	45	28
Engineering, n.e.c.	698	797	923	876	927	1,010	907	854	946
Sciences, total	76,221	79,145	79,939	79,800	82,702	84,701	87,103	90,584	93,861
Physical sciences	4,556	4,922	5,381	5,674	5,994	6,344	6,593	6,956	7,269
Astronomy	91	101	92	98	108	121	120	140	140
Chemistry	3,453	3,769	4,107	4,259	4,387	4,627	4,747	5,050	5,263
Physics	980	1,028	1,156	1,230	1,430	1,500	1,613	1,676	1,784
Physical sciences, n.e.c.	32	24	26	87	69	96	113	92	82
Earth, atmospheric, and ocean sciences	3,133	3,426	3,610	3,546	3,616	3,645	3,490	3,481	3,540
Atmospheric sciences	124	123	128	136	155	179	168	163	175
Geosciences	1,937	2,182	2,379	2,339	2,320	2,216	2,021	1,933	1,842
Oceanography	519	519	517	542	575	631	596	603	664
Earth, atm. & oc. sci., n.e.c.	553	602	586	529	566	619	705	782	859
Mathematical sciences	3,742	4,112	4,230	4,234	4,445	4,591	4,775	4,959	5,130
Computer sciences	3,239	4,135	4,981	5,301	5,889	5,932	6,216	6,496	6,279
Agricultural sciences	2,597	2,870	2,919	2,909	2,771	2,767	2,742	2,845	2,926
Biological sciences	16,571	17,197	17,327	17,557	18,010	18,651	18,823	19,649	20,529
Anatomy	389	405	405	424	424	413	444	465	490
Biochemistry	1,338	1,483	1,557	1,659	1,728	1,876	1,887	1,985	2,041
Biology	3,893	3,928	3,960	3,948	4,035	4,169	4,002	4,222	4,453
Biometry/epidemiology	526	605	609	532	720	774	781	883	953
Biophysics	125	110	112	107	110	137	141	149	162
Botany	1,197	1,299	1,233	1,232	1,231	1,159	1,184	1,155	1,126
Cell biology	367	417	408	467	518	672	771	850	937
Ecology	339	355	319	320	340	354	344	366	405
Entomology/parasitology	356	382	385	372	350	358	338	359	364
Genetics	420	483	477	467	480	556	602	588	648
Microbiology	1,662	1,742	1,802	1,856	1,892	1,888	1,963	2,136	2,232
Nutrition	2,801	2,793	2,795	2,745	2,701	2,722	2,677	2,726	2,727
Pathology	544	581	564	578	545	541	582	547	572
Pharmacology	687	721	762	796	834	842	879	882	1,000
Physiology	692	691	697	772	836	854	835	863	893
Zoology	891	841	802	802	748	769	789	782	785
Biosciences, n.e.c.	344	361	440	480	518	567	604	691	741
Psychology	16,172	16,769	17,012	17,385	18,197	18,651	19,431	20,392	21,279
Social sciences	26,211	25,714	24,479	23,194	23,780	24,120	25,033	25,804	26,909
Agricultural economics	466	457	477	477	497	495	500	540	575
Anthropology	3,148	3,129	3,062	3,013	3,009	3,227	3,206	3,285	3,478
Economics (except agricultural)	2,928	3,170	2,865	2,743	2,777	2,773	2,801	2,913	3,046
Geography	849	828	876	828	825	821	900	852	954
History and philosophy of science	89	89	92	87	92	97	96	104	116
Linguistics	1,691	1,518	1,648	1,724	1,652	1,625	1,687	1,669	1,662
Political science	8,808	8,856	8,557	7,531	8,242	8,478	8,788	9,015	9,452
Sociology	3,569	3,525	3,330	3,266	3,166	3,192	3,442	3,481	3,586
Sociology/anthropology	522	540	509	486	463	468	453	508	531
Social sciences, n.e.c.	4,141	3,602	3,063	3,039	3,057	2,944	3,160	3,437	3,509
Total, health fields	27,295	27,638	27,977	29,365	29,878	31,219	31,003	32,782	34,892
Dentistry	226	160	169	186	187	207	281	294	344
Neurology	52	56	72	109	123	141	177	239	275
Nursing	13,477	13,736	14,372	15,270	15,092	15,588	15,105	15,604	16,232
Pharmaceutical sciences	748	764	834	851	860	934	982	1,030	1,134
Preventive medicine/community health	3,761	3,713	3,727	3,920	4,173	4,030	4,020	4,388	4,727
Speech pathology/audiology	5,580	5,725	5,007	5,012	5,148	5,317	4,985	5,236	5,564
Veterinary sciences	169	165	163	205	231	233	275	296	327
Clinical medicine, n.e.c.	471	506	557	596	759	714	737	793	762
Health related, n.e.c.	2,811	2,813	3,076	3,216	3,305	4,055	4,441	4,902	5,527

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-10. Science/engineering graduate students in public doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	217,967	225,565	232,326	236,199	240,942	249,972	253,982	258,708	267,189
Total, science/engineering fields	191,755	198,913	205,725	208,527	212,692	220,125	223,039	226,546	232,748
Engineering, total	45,174	49,253	53,842	55,002	57,456	61,654	64,147	64,929	66,581
Aerospace	1,322	1,332	1,716	1,774	1,939	2,155	2,328	2,429	2,557
Agricultural	758	821	916	900	888	1,003	1,015	994	981
Biomedical	563	614	662	724	737	903	1,004	1,035	1,159
Chemical	4,145	4,675	4,943	4,869	4,783	4,751	4,743	4,517	4,416
Civil	8,801	9,229	10,067	10,443	10,326	10,364	10,467	10,749	10,833
Electrical	10,307	11,570	12,942	13,589	15,225	16,596	17,816	18,277	18,814
Engineering science	1,178	1,248	1,363	1,220	1,129	1,287	1,287	1,285	1,260
Industrial	4,178	4,511	4,218	4,479	5,154	5,601	5,841	6,024	6,720
Mechanical	6,416	7,115	8,141	8,703	9,138	10,119	10,677	10,649	10,503
Metallurgical/materials	1,790	1,815	1,980	2,176	2,315	2,503	2,610	2,569	2,802
Mining	362	352	430	409	398	417	414	382	359
Nuclear	993	1,018	963	1,011	1,009	1,058	1,075	1,092	1,107
Petroleum	268	315	451	484	537	571	604	554	517
Engineering, n.e.c.	4,093	4,638	5,050	4,221	3,878	4,326	4,266	4,373	4,553
Sciences, total	146,581	149,660	151,883	153,525	155,236	158,471	158,892	161,617	166,167
Physical sciences	18,025	18,804	19,658	20,111	20,684	21,792	22,119	22,364	22,738
Astronomy	393	420	419	433	442	469	492	495	516
Chemistry	10,891	11,407	11,956	11,944	12,274	12,667	12,743	12,649	12,799
Physics	6,678	6,906	7,214	7,547	7,800	8,462	8,707	9,048	9,255
Physical sciences, n.e.c.	63	71	69	187	168	194	177	172	168
Earth, atmospheric, and ocean sciences	10,824	11,407	11,836	11,863	11,774	11,651	11,132	10,696	10,497
Atmospheric sciences	781	779	831	844	893	898	888	876	871
Geosciences	6,717	7,409	7,923	7,931	7,800	7,533	6,875	6,452	6,157
Oceanography	1,695	1,641	1,603	1,607	1,610	1,676	1,704	1,650	1,724
Earth, atm. & oc. sci., n.e.c.	1,631	1,578	1,479	1,481	1,471	1,544	1,665	1,718	1,745
Mathematical sciences	9,291	9,878	10,036	10,506	10,912	11,553	12,140	12,795	12,978
Computer sciences	8,037	9,608	11,467	12,446	13,891	14,522	14,580	15,076	15,392
Agricultural sciences	11,055	11,305	11,227	11,033	10,363	10,363	10,031	9,986	10,069
Biological sciences	31,050	30,724	30,737	31,052	31,350	31,970	31,916	32,702	33,537
Anatomy	704	671	694	689	655	636	662	714	769
Biochemistry	2,659	2,727	2,848	3,017	3,208	3,387	3,277	3,393	3,473
Biology	6,567	6,211	6,302	6,278	6,410	6,550	6,503	6,673	6,929
Biometry/epidemiology	672	632	641	657	718	828	796	911	960
Biophysics	273	250	245	220	260	317	356	343	382
Botany	3,183	3,333	3,148	3,147	3,088	3,010	2,852	2,785	2,703
Cell biology	598	635	621	705	742	909	1,063	1,167	1,255
Ecology	993	970	905	975	929	905	849	884	939
Entomology/parasitology	1,604	1,490	1,426	1,383	1,290	1,256	1,177	1,178	1,115
Genetics	643	679	713	717	779	901	948	909	936
Microbiology	2,948	2,988	3,123	3,168	3,309	3,[illegible]44	3,307	3,590	3,579
Nutrition	3,285	3,239	3,220	3,157	3,135	3,183	3,219	3,216	3,288
Pathology	897	905	949	947	926	928	979	920	964
Pharmacology	1,356	1,419	1,456	1,469	1,493	1,501	1,511	1,560	1,624
Physiology	1,491	1,422	1,396	1,487	1,510	1,489	1,488	1,476	1,515
Zoology	2,410	2,320	2,237	2,133	1,981	1,945	1,980	1,905	1,949
Biosciences, n.e.c.	767	833	813	903	917	981	949	1,078	1,157
Psychology	16,596	17,013	16,985	17,091	17,442	17,467	17,380	17,987	18,415
Social sciences	41,703	40,921	39,937	39,423	38,820	39,153	39,594	40,011	42,541
Agricultural economics	2,133	2,127	2,146	2,108	2,100	2,107	2,073	2,101	2,116
Anthropology	4,133	4,033	3,817	3,853	3,858	3,928	3,965	4,049	4,291
Economics (except agricultural)	7,465	7,792	7,530	7,276	7,150	7,181	7,074	7,113	7,200
Geography	2,470	2,486	2,422	2,395	2,325	2,409	2,517	2,443	2,656
History and philosophy of science	141	148	141	153	138	134	134	149	154
Linguistics	1,840	1,834	1,886	1,887	1,732	1,783	1,833	1,825	1,890
Political science	13,065	12,811	12,269	12,238	12,216	12,582	12,604	12,725	13,809
Sociology	4,807	4,619	4,483	4,368	4,244	4,248	4,581	4,672	4,865
Sociology/anthropology	557	582	553	553	535	571	572	638	684
Social sciences, n.e.c.	5,092	4,489	4,690	4,592	4,522	4,210	4,241	4,296	4,876
Total, health fields	26,212	26,652	26,601	27,672	28,250	29,847	30,943	32,162	34,441
Dentistry	648	611	541	600	562	689	809	833	898
Neurology	131	139	149	183	204	237	295	378	402
Nursing	9,809	10,405	11,021	11,567	11,276	12,190	12,249	12,743	13,225
Pharmaceutical sciences	1,723	1,726	1,719	1,725	1,785	1,829	1,803	1,871	2,095
Preventive medicine/community health	4,497	4,005	3,969	4,030	4,297	4,294	4,652	4,764	4,938
Speech pathology/audiology	5,550	5,799	4,880	4,919	4,956	5,126	4,714	4,939	5,154
Veterinary sciences	410	406	401	481	551	548	646	663	718
Clinical medicine, n.e.c.	866	983	927	937	1,073	1,010	1,046	1,110	1,141
Health related, n.e.c.	2,578	2,578	2,994	3,230	3,546	3,924	4,729	4,861	5,870

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-11. Science/engineering graduate students in private doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	111,735	110,656	110,745	110,232	115,080	117,191	118,479	118,966	117,836
Total, science/engineering fields	100,246	99,957	100,024	99,071	103,627	105,793	107,548	107,572	106,111
Engineering, total	29,214	28,940	31,482	32,113	32,783	34,140	32,855	31,809	30,417
Aerospace	554	601	660	639	687	736	758	852	881
Agricultural	44	54	53	54	53	51	48	45	50
Biomedical	449	450	523	564	580	578	609	641	694
Chemical	2,119	2,254	2,409	2,327	2,232	2,140	2,247	2,015	1,896
Civil	4,515	4,317	4,362	4,309	4,112	4,130	3,397	3,402	3,300
Electrical	8,593	9,012	10,603	11,010	11,150	11,344	11,212	11,501	11,544
Engineering science	575	592	618	680	709	841	840	904	813
Industrial	5,010	4,497	4,576	4,461	4,956	5,507	5,906	4,886	3,790
Mechanical	3,497	3,652	3,948	4,263	4,108	4,488	4,413	4,401	4,402
Metallurgical/materials	1,257	1,215	1,358	1,396	1,503	1,536	1,577	1,595	1,622
Mining	82	72	68	68	65	70	70	68	60
Nuclear	290	283	240	223	211	207	204	211	216
Petroleum	250	265	273	248	215	155	186	157	134
Engineering, n.e.c.	1,979	1,676	1,791	1,871	2,202	2,357	1,388	1,131	1,015
Sciences, total	71,032	71,017	68,542	66,958	70,844	71,653	74,693	75,763	75,694
Physical sciences	7,768	7,707	8,089	8,299	8,628	8,751	8,848	8,848	9,006
Astronomy	204	212	199	206	229	220	230	236	273
Chemistry	4,363	4,386	4,592	4,655	4,878	4,935	4,924	4,833	4,884
Physics	3,189	3,109	3,298	3,438	3,497	3,552	3,623	3,739	3,828
Physical sciences, n.e.c.	12	0	0	0	24	44	71	40	21
Earth, atmospheric, and ocean sciences	2,291	2,397	2,445	2,423	2,443	2,338	2,236	2,175	2,144
Atmospheric sciences	92	98	53	51	58	58	60	53	29
Geosciences	1,572	1,639	1,765	1,785	1,733	1,643	1,510	1,452	1,380
Oceanography	238	293	304	322	374	351	318	276	337
Earth, atm. & oc. sci., n.e.c.	389	367	323	265	278	286	348	394	398
Mathematical sciences	4,739	4,892	4,849	4,561	4,356	4,110	4,081	4,149	4,018
Computer sciences	5,112	5,975	6,839	7,920	9,932	10,682	11,503	11,666	11,196
Agricultural sciences	318	291	311	294	317	312	308	316	298
Biological sciences	11,012	11,192	10,872	10,911	11,140	11,399	11,732	11,934	12,251
Anatomy	368	403	343	340	338	337	365	354	340
Biochemistry	1,363	1,363	1,346	1,443	1,449	1,489	1,526	1,533	1,657
Biology	3,642	3,677	3,249	3,258	3,141	3,218	3,121	3,119	3,172
Biometry/epidemiology	510	534	515	347	642	613	710	720	717
Biophysics	190	190	205	213	181	230	235	249	273
Botany	274	269	257	224	219	232	243	254	257
Cell biology	420	508	561	551	687	807	915	916	960
Ecology	55	48	57	59	49	51	50	79	98
Entomology/parasitology	60	50	49	55	52	50	67	62	66
Genetics	244	261	273	295	296	318	325	338	385
Microbiology	941	1,004	1,014	1,061	1,033	1,036	1,090	1,154	1,214
Nutrition	858	885	873	866	870	804	757	711	629
Pathology	507	508	470	477	382	405	407	423	407
Pharmacology	657	654	678	648	686	656	642	649	723
Physiology	653	636	598	673	701	731	725	744	691
Zoology	174	151	153	133	122	120	117	117	126
Biosciences, n.e.c.	96	51	231	268	292	302	437	512	536
Psychology	13,294	12,984	13,026	12,942	13,048	13,189	14,071	14,416	15,086
Social sciences	26,498	25,579	22,111	19,608	20,980	20,872	21,914	22,259	21,695
Agricultural economics	102	96	91	104	100	77	79	108	111
Anthropology	1,672	1,655	1,582	1,518	1,540	1,654	1,633	1,651	1,651
Economics (except agricultural)	4,942	4,860	4,485	4,236	4,241	4,071	4,183	4,228	4,231
Geography	274	232	218	209	217	182	185	195	186
History and philosophy of science	107	108	112	121	134	132	160	139	160
Linguistics	1,170	840	927	1,033	1,072	1,036	1,087	1,056	1,029
Political science	11,007	11,044	10,227	8,120	9,242	9,286	9,893	9,697	9,505
Sociology	2,243	2,051	1,893	1,754	1,758	1,653	1,749	1,780	1,793
Sociology/anthropology	464	460	461	407	371	333	310	274	262
Social sciences, n.e.c.	4,517	4,233	2,115	2,106	2,305	2,448	2,635	3,131	2,767
Total, health fields	11,489	10,699	10,721	11,161	11,453	11,398	10,931	11,394	11,725
Dentistry	294	225	235	250	273	249	248	252	259
Neurology	46	51	98	120	120	136	177	213	279
Nursing	4,323	3,956	3,965	4,346	4,456	4,004	3,784	3,549	3,757
Pharmaceutical sciences	815	782	835	703	674	764	722	660	668
Preventive medicine/community health	2,633	2,671	2,523	2,627	2,809	2,745	2,707	2,765	2,667
Speech pathology/audiology	1,034	976	1,049	1,005	1,178	1,013	933	1,025	1,064
Veterinary sciences	48	40	39	50	59	59	65	72	64
Clinical medicine, n.e.c.	350	338	374	370	430	449	513	543	540
Health related, n.e.c.	1,946	1,660	1,603	1,690	1,454	1,979	1,782	2,315	2,427

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-12. Science/engineering graduate students in doctorate-granting institutions by enrollment status, citizenship, and racial/ethnic background: 1983-89

Enrollment status, citizenship, and racial/ethnic background	1983	1984	1985	1986	1987	1988	1989
Total enrollment:	343,071	346,431	356,022	367,163	372,461	377,674	385,025
Total U.S. citizens	274,015	275,596	280,431	284,290	284,788	284,847	288,699
Black, non-Hispanic	9,643	9,373	9,413	9,408	9,488	10,316	10,667
American Indian/Alaskan Native	879	839	737	742	777	910	916
Asian/Pacific Islander	8,602	9,388	11,181	12,110	13,636	14,298	14,809
Hispanic	8,596	8,445	8,832	9,051	9,211	9,507	9,890
White, non-Hispanic	227,255	226,232	227,636	233,113	233,953	234,732	236,675
Other or unknown	19,040	21,319	22,632	19,866	17,723	15,084	15,742
Foreign	69,056	70,835	75,591	82,873	87,673	92,827	96,326
Full time enrollment:	236,076	237,460	241,605	250,470	254,865	259,848	267,554
Total U.S. citizens	176,607	176,565	175,919	177,961	178,779	178,955	184,166
Black, non-Hispanic	5,336	5,260	5,358	5,325	5,381	5,894	6,423
American Indian/Alaskan Native	578	561	499	514	537	601	611
Asian/Pacific Islander	5,673	6,406	7,281	8,090	9,200	9,653	10,234
Hispanic	5,340	5,386	5,728	5,883	5,846	6,174	6,642
White, non-Hispanic	149,726	148,524	145,804	149,109	148,563	149,355	152,309
Other or unknown	9,954	10,428	11,249	9,040	9,252	7,278	7,947
Foreign	59,469	60,895	65,686	72,509	76,086	80,893	83,388
Part time enrollment:	106,995	108,971	114,417	116,693	117,596	117,826	117,471
Total U.S. citizens	97,408	99,031	104,512	106,329	106,009	105,892	104,533
Black, non-Hispanic	4,307	4,113	4,055	4,083	4,107	4,422	4,244
American Indian/Alaskan Native	301	278	238	228	240	309	305
Asian/Pacific Islander	2,929	2,982	3,900	4,020	4,436	4,645	4,575
Hispanic	3,256	3,059	3,104	3,168	3,365	3,333	3,248
White, non-Hispanic	77,529	77,708	81,832	84,004	85,390	85,377	84,366
Other or unknown	9,086	10,891	11,383	10,826	8,471	7,806	7,795
Foreign	9,587	9,940	9,905	10,364	11,587	11,934	12,938

SOURCE: National Science Foundation, SRS

Table C-13. Science/engineering graduate students in doctorate-granting institutions by field, citizenship, and racial/ethnic background: 1980-89

Field, citizenship, and racial/ethnic background	1981 1/	1982 1/	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields:	329,702	336,221	343,071	346,431	356,022	367,163	372,461	377,674	385,025
Total U.S. citizens	-	-	274,015	275,596	280,431	284,290	284,788	284,847	288,699
Black, non-Hispanic	8,082	9,294	9,643	9,373	9,413	9,408	9,488	10,316	10,667
American Indian/Alaskan Native	556	868	879	839	737	742	777	910	916
Asian/Pacific Islander	6,461	7,859	8,602	9,388	11,181	12,110	13,636	14,298	14,809
Hispanic	5,825	7,470	8,596	8,445	8,832	9,051	9,211	9,507	9,890
White, non-Hispanic	188,340	219,433	227,255	226,232	227,636	233,113	233,953	234,732	236,675
Other or unknown	-	-	19,040	21,319	22,632	19,866	17,723	15,084	15,742
Foreign	-	-	69,056	70,835	75,591	82,873	87,673	92,827	96,326
Sciences, total:	217,613	220,677	220,425	220,483	226,080	230,124	233,585	237,380	241,861
Total U.S. citizens	-	-	180,537	179,024	181,152	181,221	181,395	182,043	184,024
Black, non-Hispanic	6,180	6,997	6,980	6,542	6,608	6,497	6,572	7,072	7,216
American Indian/Alaskan Native	343	577	570	532	506	494	527	624	620
Asian/Pacific Islander	3,806	4,583	4,911	5,236	6,039	6,501	7,467	7,940	8,272
Hispanic	4,432	5,679	6,072	5,869	6,135	6,127	6,083	6,232	6,606
White, non-Hispanic	128,172	149,669	152,131	149,222	150,015	151,329	151,342	152,703	153,715
Other or unknown	-	-	9,873	11,623	11,849	10,273	9,404	7,472	7,595
Foreign	-	-	39,888	41,459	44,928	48,903	52,190	55,337	57,837
Physical sciences:	25,793	26,511	27,747	28,410	29,312	30,543	30,967	31,212	31,744
Total U.S. citizens	-	-	20,375	20,618	20,690	20,826	20,687	20,470	20,356
Black, non-Hispanic	345	436	427	456	388	383	398	437	452
American Indian/Alaskan Native	16	41	37	70	31	42	42	43	42
Asian/Pacific Islander	565	628	641	787	837	822	936	1,103	1,017
Hispanic	355	461	539	507	564	587	547	572	623
White, non-Hispanic	15,173	16,733	17,641	17,631	17,369	17,654	17,186	17,382	17,378
Other or unknown	-	-	1,090	1,167	1,501	1,338	1,578	933	844
Foreign	-	-	7,372	7,792	8,622	9,717	10,280	10,742	11,388
Earth, atmospheric, and ocean sciences:	13,115	13,804	14,281	14,286	14,217	13,989	13,368	12,871	12,641
Total U.S. citizens	-	-	12,479	12,550	12,403	11,944	11,202	10,492	10,104
Black, non-Hispanic	80	78	99	101	111	90	87	97	80
American Indian/Alaskan Native	14	18	24	21	22	20	17	25	26
Asian/Pacific Islander	115	178	206	155	167	126	159	179	181
Hispanic	147	156	200	241	192	197	212	198	194
White, non-Hispanic	8,558	10,423	11,350	10,952	10,899	10,815	10,200	9,643	9,258
Other or unknown	-	-	600	1,080	1,012	696	527	350	365
Foreign	-	-	1,802	1,736	1,814	2,045	2,166	2,379	2,537
Mathematical sciences:	14,030	14,770	14,885	15,067	15,268	15,663	16,221	16,944	16,996
Total U.S. citizens	-	-	10,270	10,176	10,177	10,178	10,418	10,808	10,652
Black, non-Hispanic	240	270	275	255	267	303	312	293	311
American Indian/Alaskan Native	6	26	20	15	14	22	40	25	25
Asian/Pacific Islander	320	404	426	421	498	586	645	619	578
Hispanic	203	244	295	250	231	240	237	298	271
White, non-Hispanic	7,183	8,514	8,585	8,419	8,336	8,192	8,317	8,813	8,662
Other or unknown	-	-	669	816	831	835	867	760	805
Foreign	-	-	4,615	4,891	5,091	5,485	5,803	6,136	6,344
Computer sciences:	13,149	15,583	18,306	20,366	23,823	25,204	26,083	26,742	26,588
Total U.S. citizens	-	-	13,552	14,830	17,391	18,303	18,546	18,890	18,205
Black, non-Hispanic	189	350	371	377	457	506	591	637	661
American Indian/Alaskan Native	3	21	13	43	50	12	16	30	34
Asian/Pacific Islander	507	646	808	890	1,376	1,526	1,837	2,058	1,975
Hispanic	73	176	194	208	381	347	436	403	449
White, non-Hispanic	6,416	9,229	10,202	10,889	12,689	13,543	14,108	14,543	13,845
Other or unknown	-	-	1,964	2,423	2,438	2,369	1,558	1,219	1,241
Foreign	-	-	4,754	5,536	6,432	6,901	7,537	7,852	8,383
Agricultural sciences:	11,373	11,596	11,538	11,327	10,680	10,675	10,339	10,302	10,367
Total U.S. citizens	-	-	8,963	8,827	8,166	8,022	7,558	7,524	7,666
Black, non-Hispanic	95	122	116	118	117	97	112	124	131
American Indian/Alaskan Native	11	22	26	21	15	16	21	22	22
Asian/Pacific Islander	110	131	116	126	115	116	151	195	234
Hispanic	151	183	200	224	284	273	194	230	262
White, non-Hispanic	7,434	8,043	8,179	8,167	7,302	7,263	6,910	6,782	6,771
Other or unknown	-	-	326	171	333	257	170	171	246
Foreign	-	-	2,575	2,500	2,514	2,653	2,781	2,778	2,701

See footnotes at end of table.

Table C-13. Science/engineering graduate students in doctorate-granting institutions by field, citizenship, and racial/ethnic background: 1980-89 -Continued

Field, citizenship, and racial/ethnic background	1981 1/	1982 1/	1983	1984	1985	1986	1987	1988	1989
Biological sciences:	42,062	41,916	41,609	41,963	42,490	43,369	43,648	44,636	45,788
Total U.S. citizens	-	-	35,813	35,884	35,805	35,747	35,122	35,089	35,263
Black, non-Hispanic	679	831	816	834	867	850	813	925	968
American Indian/Alaskan Native	34	71	95	71	76	95	84	99	80
Asian/Pacific Islander	886	1,041	1,156	1,222	1,348	1,497	1,596	1,736	1,943
Hispanic	493	696	768	763	838	873	944	1,019	1,107
White, non-Hispanic	28,717	31,708	31,826	32,086	31,461	31,321	30,411	30,485	30,129
Other or unknown	-	-	1,152	908	1,215	1,111	1,274	825	1,036
Foreign	-	-	5,796	6,079	6,685	7,622	8,526	9,547	10,525
Psychology:	29,890	29,997	30,011	30,033	30,490	30,656	31,451	32,403	33,501
Total U.S. citizens	-	-	28,822	28,832	29,202	29,360	30,118	30,954	32,042
Black, non-Hispanic	1,069	1,149	1,286	1,309	1,191	1,197	1,200	1,276	1,267
American Indian/Alaskan Native	63	90	90	82	99	95	108	124	138
Asian/Pacific Islander	345	358	382	409	437	487	602	624	666
Hispanic	1,067	1,249	1,278	1,356	1,376	1,456	1,369	1,406	1,407
White, non-Hispanic	17,803	22,714	24,296	23,680	24,111	24,561	25,709	26,381	27,457
Other or unknown	-	-	1,490	1,996	1,988	1,564	1,130	1,143	1,107
Foreign	-	-	1,189	1,201	1,288	1,296	1,333	1,449	1,459
Social sciences:	68,201	66,500	62,048	59,031	59,800	60,025	61,508	62,270	64,236
Total U.S. citizens	-	-	50,263	47,307	47,318	46,841	47,744	47,816	49,736
Black, non-Hispanic	3,483	3,761	3,590	3,092	3,210	3,071	3,059	3,283	3,346
American Indian/Alaskan Native	196	288	265	209	199	192	199	256	253
Asian/Pacific Islander	958	1,197	1,176	1,226	1,261	1,341	1,541	1,426	1,678
Hispanic	1,943	2,514	2,598	2,320	2,269	2,154	2,144	2,106	2,293
White, non-Hispanic	36,888	42,305	40,052	37,398	37,848	37,980	38,501	38,674	40,215
Other or unknown	-	-	2,582	3,062	2,531	2,103	2,300	2,071	1,951
Foreign	-	-	11,785	11,724	12,482	13,184	13,764	14,454	14,500
Engineering, total:	74,388	78,193	85,324	87,115	90,239	95,794	97,002	96,738	96,998
Total U.S. citizens	-	-	58,921	60,361	62,539	64,986	64,737	62,739	62,257
Black, non-Hispanic	781	984	1,203	1,295	1,230	1,309	1,279	1,327	1,427
American Indian/Alaskan Native	108	148	156	176	112	123	107	126	110
Asian/Pacific Islander	2,012	2,409	2,833	3,278	4,280	4,647	5,182	5,224	5,267
Hispanic	869	994	1,309	1,376	1,340	1,538	1,596	1,591	1,572
White, non-Hispanic	35,304	40,047	45,283	46,066	47,010	49,661	50,276	48,803	47,614
Other or unknown	-	-	8,137	8,170	8,567	7,708	6,297	5,668	6,267
Foreign	-	-	26,403	26,754	27,700	30,808	32,265	33,999	34,741
Chemical engineering:	6,264	6,929	7,352	7,196	7,015	6,891	6,990	6,532	6,312
Total U.S. citizens	-	-	4,888	4,880	4,623	4,555	4,541	4,016	3,574
Black, non-Hispanic	51	81	80	69	68	82	85	83	78
American Indian/Alaskan Native	13	13	11	9	8	5	26	24	10
Asian/Pacific Islander	179	278	292	321	262	280	348	308	241
Hispanic	70	88	81	132	101	110	110	132	108
White, non-Hispanic	2,671	3,669	4,134	4,004	3,785	3,821	3,755	3,326	3,009
Other or unknown	-	-	290	345	399	257	217	143	128
Foreign	-	-	2,464	2,316	2,392	2,336	2,449	2,516	2,738
Civil engineering:	13,316	13,546	14,429	14,752	14,438	14,494	13,864	14,151	14,133
Total U.S. citizens	-	-	9,306	9,548	9,133	8,888	8,354	8,427	8,488
Black, non-Hispanic	135	126	161	188	184	175	160	180	219
American Indian/Alaskan Native	7	18	21	18	15	28	7	16	19
Asian/Pacific Islander	371	359	392	389	400	433	544	544	557
Hispanic	198	194	264	265	224	265	240	258	258
White, non-Hispanic	6,415	6,793	7,377	7,467	7,198	7,088	6,786	6,984	6,975
Other or unknown	-	-	1,091	1,221	1,112	899	617	445	460
Foreign	-	-	5,123	5,204	5,305	5,606	5,510	5,724	5,645
Electrical engineering:	18,900	20,582	23,545	24,599	26,375	27,940	29,028	29,778	30,358
Total U.S. citizens	-	-	16,220	17,354	18,364	18,875	19,389	19,996	20,181
Black, non-Hispanic	202	272	307	355	399	381	372	433	473
American Indian/Alaskan Native	34	55	39	40	26	39	12	33	34
Asian/Pacific Islander	603	726	954	1,272	1,789	1,906	2,162	2,269	2,284
Hispanic	249	291	354	385	408	448	481	471	492
White, non-Hispanic	8,399	9,919	11,338	11,823	12,671	13,057	13,867	14,224	14,250
Other or unknown	-	-	3,228	3,479	3,071	3,044	2,495	2,566	2,648
Foreign	-	-	7,325	7,245	8,011	9,065	9,639	9,782	10,177

See footnotes at end of table.

Table C-13. Science/engineering graduate students in doctorate-granting institutions by field, citizenship, and racial/ethnic background: 1980-89 -Continued

Field, citizenship, and racial/ethnic background	1981 1/	1982 1/	1983	1984	1985	1986	1987	1988	1989
Industrial engineering:	9,188	9,008	8,794	8,940	10,110	11,108	11,747	10,910	10,510
Total U.S. citizens	-	-	7,152	7,165	8,196	8,990	9,189	8,310	7,734
Black, non-Hispanic	139	193	274	278	208	259	262	261	245
American Indian/Alaskan Native	16	14	14	27	11	10	22	13	14
Asian/Pacific Islander	180	254	194	216	300	378	419	445	422
Hispanic	126	167	212	274	242	270	276	273	241
White, non-Hispanic	4,945	5,355	5,745	5,515	6,556	6,898	7,562	6,776	6,173
Other or unknown	-	-	713	855	879	1,175	648	542	639
Foreign	-	-	1,642	1,775	1,914	2,118	2,558	2,600	2,776
Mechanical engineering:	9,913	10,767	12,089	12,966	13,246	14,607	15,090	15,050	14,905
Total U.S. citizens	-	-	7,637	8,310	8,658	9,412	9,785	9,245	9,463
Black, non-Hispanic	69	94	117	154	141	144	166	170	171
American Indian/Alaskan Native	4	14	16	27	22	13	19	10	9
Asian/Pacific Islander	228	308	366	418	695	731	783	672	727
Hispanic	96	102	108	113	164	220	256	186	184
White, non-Hispanic	4,010	5,018	6,301	6,664	6,680	7,381	7,353	7,214	6,876
Other or unknown	-	-	729	934	956	923	1,208	993	1,496
Foreign	-	-	4,452	4,656	4,588	5,195	5,305	5,805	5,442
Other engineering:	16,807	17,361	19,115	18,662	19,055	20,754	20,283	20,317	20,780
Total U.S. citizens	-	-	13,718	13,104	13,565	14,266	13,479	12,745	12,817
Black, non-Hispanic	185	218	264	251	230	268	234	200	241
American Indian/Alaskan Native	34	34	55	55	30	28	21	30	24
Asian/Pacific Islander	451	484	635	662	834	919	926	986	1,036
Hispanic	130	152	290	207	201	225	233	271	289
White, non-Hispanic	8,864	9,293	10,388	10,593	10,120	11,416	10,953	10,279	10,331
Other or unknown	-	-	2,086	1,336	2,150	1,410	1,112	979	896
Foreign	-	-	5,397	5,558	5,490	6,488	6,804	7,572	7,963
Health fields:	37,701	37,351	37,322	38,833	39,703	41,245	41,874	43,556	46,166
Total U.S. citizens	-	-	34,557	36,211	36,740	38,083	38,656	40,065	42,418
Black, non-Hispanic	1,121	1,313	1,460	1,536	1,575	1,602	1,637	1,917	2,024
American Indian/Alaskan Native	105	143	153	131	119	125	143	160	186
Asian/Pacific Islander	643	867	858	874	862	962	987	1,134	1,270
Hispanic	524	797	1,215	1,200	1,357	1,386	1,532	1,684	1,712
White, non-Hispanic	24,864	29,717	29,841	30,944	30,611	32,123	32,335	33,226	35,346
Other or unknown	-	-	1,030	1,526	2,216	1,885	2,022	1,944	1,880
Foreign	-	-	2,765	2,622	2,963	3,162	3,218	3,491	3,748

1/ For part-time students, distribution by citizenship was first requested in 1982 and did not become a standard question until 1983.

SOURCE: National Science Foundation, SRS

Table C-14. Full-time science/engineering graduate students in doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	226,921	229,993	236,076	237,460	241,605	250,470	254,865	259,848	267,554
Total, science/engineering fields	204,776	209,028	215,550	216,633	220,331	229,170	232,930	237,124	243,204
Engineering, total	44,828	48,698	52,690	53,974	54,817	59,031	60,352	61,520	62,379
Aerospace	1,480	1,519	1,825	1,840	1,980	2,138	2,355	2,517	2,688
Agricultural	672	739	766	773	767	881	924	879	851
Biomedical	853	908	1,012	1,106	1,117	1,280	1,352	1,402	1,572
Chemical	4,921	5,524	5,790	5,656	5,494	5,542	5,632	5,330	5,228
Civil	8,819	9,158	9,917	10,230	9,860	10,092	9,613	9,870	9,840
Electrical	10,156	11,377	12,854	13,461	14,358	15,832	16,457	17,012	17,560
Engineering science	1,204	1,432	1,339	1,256	1,246	1,427	1,369	1,421	1,264
Industrial	3,432	3,590	3,142	3,276	3,355	3,718	4,073	4,184	4,499
Mechanical	6,337	7,128	8,178	8,511	8,683	9,599	9,966	10,198	10,115
Metallurgical/materials	2,436	2,453	2,686	2,863	3,070	3,317	3,370	3,398	3,657
Mining	372	351	404	403	371	419	406	379	329
Nuclear	1,032	1,042	1,052	1,018	1,030	1,059	1,044	1,105	1,112
Petroleum	390	470	607	602	551	551	619	570	494
Engineering, n.e.c.	2,724	3,007	3,118	2,979	2,935	3,176	3,172	3,255	3,170
Sciences, total	159,948	160,330	162,860	162,659	165,514	170,139	172,578	175,604	180,825
Physical sciences	22,612	23,339	24,502	25,147	25,938	27,069	27,652	27,778	28,396
Astronomy	565	590	585	596	635	654	681	705	762
Chemistry	13,170	13,755	14,495	14,615	15,067	15,537	15,735	15,582	15,810
Physics	8,818	8,941	9,361	9,800	10,103	10,753	11,078	11,373	11,728
Physical sciences, n.e.c.	59	53	61	136	133	125	158	118	96
Earth, atmospheric, and ocean sciences	10,543	10,918	11,497	11,266	10,871	10,862	10,097	9,837	9,665
Atmospheric sciences	739	771	778	770	867	854	822	825	803
Geosciences	6,844	7,285	7,908	7,797	7,350	7,110	6,411	6,060	5,741
Oceanography	1,589	1,551	1,547	1,518	1,520	1,652	1,603	1,576	1,736
Earth, atm. & oc. sci., n.e.c.	1,371	1,311	1,264	1,181	1,134	1,246	1,261	1,376	1,385
Mathematical sciences	9,688	10,178	10,316	10,613	11,160	11,727	12,364	12,840	13,111
Computer sciences	6,472	7,911	9,276	10,108	12,374	13,389	13,639	13,701	14,088
Agricultural sciences	9,656	9,519	9,420	9,323	8,721	8,852	8,611	8,588	8,568
Biological sciences	35,504	35,248	35,234	35,688	35,696	36,609	37,223	38,244	39,461
Anatomy	963	937	921	936	891	893	940	985	1,030
Biochemistry	3,749	3,832	3,981	4,245	4,471	4,649	4,625	4,759	4,896
Biology	7,768	7,639	7,519	7,535	7,194	7,348	7,457	7,671	8,140
Biometry/epidemiology	999	919	877	751	996	1,055	1,124	1,176	1,178
Biophysics	457	423	437	419	381	449	468	544	610
Botany	3,024	3,143	3,013	2,969	2,814	2,844	2,672	2,649	2,552
Cell biology	989	1,110	1,138	1,209	1,406	1,655	1,900	2,028	2,153
Ecology	931	905	835	865	864	844	784	822	872
Entomology/parasitology	1,452	1,340	1,305	1,264	1,138	1,107	1,062	1,061	1,009
Genetics	826	877	919	942	1,014	1,129	1,167	1,146	1,240
Microbiology	3,462	3,499	3,680	3,803	3,867	3,853	4,035	4,332	4,349
Nutrition	3,101	3,033	2,882	2,895	2,916	2,928	2,892	2,758	2,737
Pathology	1,050	1,014	1,063	1,077	1,029	1,065	1,120	1,117	1,154
Pharmacology	1,913	1,939	2,002	1,997	2,064	2,036	2,004	2,070	2,214
Physiology	1,924	1,805	1,766	1,969	1,986	2,005	1,996	2,008	2,057
Zoology	2,227	2,118	2,025	1,844	1,699	1,708	1,775	1,708	1,766
Biosciences, n.e.c.	669	715	871	968	966	1,041	1,202	1,410	1,504
Psychology	22,245	21,900	22,150	21,600	21,334	21,995	22,558	23,308	24,727
Social sciences	43,228	41,317	40,465	38,916	39,420	39,636	40,434	41,308	42,809
Agricultural economics	2,015	1,956	1,994	1,975	1,946	1,915	1,823	1,878	1,885
Anthropology	4,244	4,027	3,866	3,900	3,795	3,996	4,027	4,189	4,337
Economics (except agricultural)	9,089	9,087	8,859	8,478	8,614	8,682	8,727	8,809	8,905
Geography	2,052	1,987	2,025	1,997	1,950	1,942	2,074	1,982	2,108
History and philosophy of science	217	223	229	243	227	237	267	266	283
Linguistics	2,251	2,145	2,316	2,264	2,303	2,307	2,388	2,438	2,389
Political science	12,612	12,179	11,887	11,078	11,571	11,867	11,670	11,983	12,681
Sociology	5,101	4,648	4,566	4,426	4,361	4,347	4,743	4,828	4,982
Sociology/anthropology	524	612	596	572	534	550	527	538	607
Social sciences, n.e.c.	5,123	4,453	4,127	3,983	4,119	3,793	4,188	4,397	4,632
Total, health fields	22,145	20,965	20,526	20,827	21,274	21,300	21,935	22,724	24,350
Dentistry	761	727	701	768	745	825	909	930	1,008
Neurology	175	188	244	299	322	370	470	588	665
Nursing	6,746	6,196	5,726	5,682	5,536	5,379	5,350	5,333	5,318
Pharmaceutical sciences	1,687	1,703	1,695	1,697	1,716	1,763	1,746	1,828	2,015
Preventive medicine/community health	4,443	4,029	3,926	3,915	4,090	4,032	4,112	4,173	4,171
Speech pathology/audiology	4,438	4,488	4,429	4,439	4,595	4,451	4,120	4,333	4,638
Veterinary sciences	350	356	337	402	491	486	575	589	649
Clinical medicine, n.e.c.	927	989	995	978	1,117	1,094	1,176	1,255	1,381
Health related, n.e.c.	2,618	2,290	2,473	2,647	2,662	2,900	3,477	3,695	4,505

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-15. Full-time science/engineering graduate students in doctorate-granting institutions by field and source of major support: 1981-89

Field and source of major support	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields:									
Total, all sources	226,921	229,993	236,076	237,460	241,605	250,470	254,865	259,848	267,554
Federal, total	49,951	46,401	46,763	46,768	48,102	50,407	52,681	54,608	56,712
Dept of Defense	5,623	5,842	6,871	7,020	7,214	7,836	8,689	9,424	9,248
Dept of HHS, total	17,380	15,562	14,751	14,864	15,616	16,153	16,982	17,737	18,429
NIH	11,081	10,700	10,718	10,884	11,038	11,815	12,920	13,732	14,391
Other HHS	6,299	4,862	4,033	3,980	4,578	4,338	4,062	4,005	4,038
NSF	9,091	9,205	9,465	8,802	10,149	10,808	11,212	11,597	11,829
All other Federal	17,857	15,792	15,676	15,082	15,123	15,610	15,798	15,850	17,206
Institutional support	88,830	91,456	94,085	97,782	100,213	105,446	108,399	111,019	115,191
Other outside support, total	21,892	23,418	24,011	24,167	26,008	26,097	24,785	25,053	25,097
All other U.S.	13,404	14,696	15,364	16,238	18,439	18,654	17,953	18,441	18,905
Foreign	8,488	8,722	8,647	7,929	7,569	7,443	6,832	6,612	6,192
Self-support	66,248	68,718	71,217	68,743	67,282	68,520	69,000	69,168	70,554
Sciences, total:									
Total, all sources	159,948	160,330	162,860	162,659	165,514	170,139	172,578	175,604	180,825
Federal, total	31,374	29,275	29,328	29,703	31,005	32,300	33,474	34,585	36,195
Dept of Defense	2,301	2,232	2,633	2,975	3,185	3,503	3,888	4,248	4,035
Dept of HHS, total	11,257	10,368	10,076	10,255	10,624	11,250	11,951	12,687	13,326
NIH	9,564	9,067	9,064	9,395	9,537	10,244	10,938	11,762	12,284
Other HHS	1,693	1,301	1,012	860	1,087	1,006	1,013	925	1,042
NSF	6,697	6,604	6,762	7,076	7,427	7,643	7,687	7,752	8,016
All other Federal	11,119	10,071	9,857	9,397	9,769	9,904	9,948	9,898	10,818
Institutional support	70,410	71,663	73,324	75,622	76,736	79,870	81,759	83,871	86,339
Other outside support, total	13,752	14,500	14,509	14,043	14,878	14,511	13,727	13,999	14,059
All other U.S.	7,854	8,613	8,657	8,775	9,967	9,718	9,337	9,649	10,101
Foreign	5,898	5,887	5,852	5,268	4,911	4,793	4,390	4,350	3,958
Self-support	44,412	44,892	45,699	43,291	42,895	43,458	43,618	43,149	44,232
Physical sciences:									
Total, all sources	22,612	23,339	24,502	25,147	25,938	27,069	27,652	27,778	28,396
Federal, total	7,899	7,644	8,050	8,551	8,723	9,434	9,616	9,748	10,155
Dept of Defense	753	706	827	997	1,013	1,147	1,273	1,465	1,394
Dept of HHS, total	1,515	1,490	1,507	1,592	1,763	1,992	2,071	2,122	2,074
NIH	1,408	1,408	1,409	1,471	1,602	1,827	1,908	1,973	1,945
Other HHS	107	82	98	121	161	165	163	149	129
NSF	3,029	3,102	3,210	3,393	3,500	3,661	3,574	3,642	3,591
All other Federal	2,602	2,346	2,506	2,569	2,447	2,634	2,698	2,519	3,096
Institutional support	11,936	12,582	13,166	13,281	13,536	14,013	14,408	14,417	14,699
Other outside support, total	1,416	1,740	1,688	1,791	2,046	1,907	1,833	1,962	1,971
All other U.S.	1,051	1,295	1,225	1,355	1,617	1,566	1,561	1,651	1,742
Foreign	365	445	463	436	429	341	272	311	229
Self-support	1,361	1,373	1,598	1,524	1,633	1,715	1,795	1,651	1,571
Earth, atmospheric, and ocean sciences:									
Total, all sources	10,543	10,918	11,497	11,266	10,871	10,862	10,097	9,837	9,665
Federal, total	2,965	2,808	2,831	2,811	2,933	3,014	2,855	2,782	2,824
Dept of Defense	310	300	363	372	415	452	497	457	457
Dept of HHS, total	96	73	32	38	39	37	56	51	25
NIH	17	38	9	27	24	23	22	19	17
Other HHS	79	35	23	11	15	14	34	32	8
NSF	1,199	1,186	1,315	1,332	1,372	1,356	1,260	1,236	1,235
All other Federal	1,360	1,249	1,121	1,069	1,107	1,169	1,042	1,038	1,107
Institutional support	3,918	4,097	4,073	4,177	3,975	4,192	4,043	4,151	4,140
Other outside support, total	1,129	1,199	1,256	1,222	1,375	1,162	988	1,005	969
All other U.S.	752	839	953	909	1,020	852	663	644	656
Foreign	377	360	303	313	355	310	325	361	313
Self-support	2,531	2,814	3,337	3,056	2,588	2,494	2,211	1,899	1,732
Mathematical sciences:									
Total, all sources	9,688	10,178	10,316	10,613	11,160	11,727	12,364	12,840	13,111
Federal, total	782	802	747	755	930	992	1,084	1,168	1,234
Dept of Defense	343	363	305	303	385	429	435	511	450
Dept of HHS, total	35	39	41	26	21	24	30	28	36
NIH	24	25	28	22	18	19	24	25	28
Other HHS	11	14	13	4	3	5	6	3	8
NSF	227	228	222	277	321	357	435	463	470
All other Federal	177	172	179	149	203	182	184	166	278
Institutional support	6,460	6,828	7,120	7,389	7,758	8,170	8,506	8,785	9,028
Other outside support, total	526	536	507	626	543	587	536	610	564
All other U.S.	173	182	172	267	253	245	230	347	359
Foreign	353	354	335	359	290	342	306	263	205
Self-support	1,920	2,012	1,942	1,843	1,929	1,978	2,238	2,277	2,285

Continued on next page.

Table C-15. Full-time science/engineering graduate students in doctorate-granting institutions by field and source of major support: 1981-89 -Continued

Field and source of major support	1981	1982	1983	1984	1985	1986	1987	1988	1989
Computer sciences:									
Total, all sources	6,472	7,911	9,276	10,108	12,374	13,389	13,639	13,701	14,088
Federal, total	944	973	1,045	1,215	1,568	1,818	2,022	2,167	2,305
Dept of Defense	390	367	441	611	840	1,014	1,114	1,205	1,178
Dept of HHS, total	50	46	29	25	21	45	62	64	72
NIH	48	42	26	24	20	43	61	64	53
Other HHS	2	4	3	1	1	2	1	0	19
NSF	376	385	384	431	502	527	623	633	767
All other Federal	128	175	191	148	205	232	223	265	288
Institutional support	2,317	2,581	3,073	3,486	4,084	4,315	4,750	4,879	4,955
Other outside support, total	598	670	689	705	1,261	1,424	1,115	1,139	1,163
All other U.S.	446	502	493	504	969	1,151	889	892	912
Foreign	152	168	196	201	292	273	226	247	251
Self-support	2,613	3,687	4,469	4,702	5,461	5,832	5,752	5,516	5,665
Agricultural sciences:									
Total, all sources	9,656	9,519	9,420	9,323	8,721	8,852	8,611	8,588	8,568
Federal, total	1,710	1,654	1,510	1,346	1,502	1,600	1,660	1,692	1,724
Dept of Defense	11	8	15	17	28	17	30	32	13
Dept of HHS, total	57	37	23	16	15	12	28	31	28
NIH	51	32	17	15	15	11	21	30	17
Other HHS	6	5	6	1	0	1	7	1	11
NSF	70	71	61	66	93	69	57	49	47
All other Federal	1,572	1,538	1,411	1,247	1,366	1,502	1,545	1,580	1,636
Institutional support	3,448	3,444	3,576	3,821	3,369	3,529	3,479	3,349	3,375
Other outside support, total	2,116	2,008	2,090	1,942	1,852	1,742	1,582	1,658	1,620
All other U.S.	931	865	943	906	990	891	797	900	978
Foreign	1,185	1,143	1,147	1,036	862	851	785	758	642
Self-support	2,382	2,413	2,244	2,214	1,998	1,981	1,890	1,889	1,849
Biological sciences:									
Total, all sources	35,504	35,248	35,234	35,688	35,696	36,609	37,223	38,244	39,461
Federal, total	10,516	10,056	10,171	10,333	10,630	11,069	11,827	12,459	13,219
Dept of Defense	117	122	242	239	218	191	250	284	251
Dept of HHS, total	7,208	6,944	7,089	7,221	7,403	7,900	8,385	8,953	9,627
NIH	6,813	6,622	6,779	6,998	7,046	7,536	8,070	8,685	9,306
Other HHS	395	322	310	223	357	364	315	268	321
NSF	1,100	1,079	1,044	1,070	1,068	1,075	1,127	1,112	1,247
All other Federal	2,091	1,911	1,796	1,803	1,941	1,903	2,065	2,110	2,094
Institutional support	15,695	15,797	15,869	16,403	16,367	17,006	17,077	17,385	17,974
Other outside support, total	2,746	3,055	3,172	3,088	3,244	3,050	3,173	3,459	3,485
All other U.S.	1,673	1,965	2,041	2,067	2,306	2,115	2,288	2,612	2,669
Foreign	1,073	1,090	1,131	1,021	938	935	885	847	816
Self-support	6,547	6,340	6,022	5,864	5,455	5,484	5,146	4,941	4,783
Psychology:									
Total, all sources	22,245	21,900	22,150	21,600	21,334	21,995	22,558	23,308	24,727
Federal, total	2,896	2,283	1,980	1,942	1,958	1,894	1,932	2,030	2,079
Dept of Defense	139	114	135	133	117	132	154	146	116
Dept of HHS, total	1,633	1,300	1,004	1,024	1,051	944	1,003	1,120	1,163
NIH	898	693	584	629	618	585	626	759	717
Other HHS	735	607	420	395	433	359	377	361	446
NSF	243	206	190	206	235	231	246	232	233
All other Federal	881	663	651	579	555	587	529	532	567
Institutional support	8,622	8,567	8,784	9,218	9,511	9,915	9,842	10,249	10,690
Other outside support, total	1,505	1,377	1,316	1,325	1,326	1,334	1,213	1,007	1,095
All other U.S.	1,430	1,304	1,250	1,258	1,271	1,273	1,159	950	1,046
Foreign	75	73	66	67	55	61	54	57	49
Self-support	9,222	9,673	10,070	9,115	8,539	8,852	9,571	10,022	10,863
Social sciences:									
Total, all sources	43,228	41,317	40,465	38,914	39,420	39,636	40,434	41,308	42,809
Federal, total	3,662	3,055	2,994	2,750	2,761	2,479	2,478	2,539	2,655
Dept of Defense	238	252	305	303	169	121	135	148	176
Dept of HHS, total	663	439	351	313	311	296	316	318	301
NIH	305	207	212	209	194	200	206	207	201
Other HHS	358	232	139	104	117	96	110	111	100
NSF	453	347	336	301	336	367	365	385	426
All other Federal	2,308	2,017	2,002	1,833	1,945	1,695	1,662	1,688	1,752
Institutional support	18,014	17,767	17,663	17,847	18,136	18,730	19,654	20,656	21,478
Other outside support, total	3,716	3,915	3,791	3,344	3,231	3,305	3,287	3,159	3,192
All other U.S.	1,398	1,661	1,580	1,509	1,541	1,625	1,750	1,653	1,739
Foreign	2,318	2,254	2,211	1,835	1,690	1,680	1,537	1,506	1,453
Self-support	17,836	16,580	16,017	14,973	15,292	15,122	15,015	14,954	15,484

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Table C-15. Full-time science/engineering graduate students in doctorate-granting institutions by field and source of major support: 1981-89 -Continued

Field and source of major support	1981	1982	1983	1984	1985	1986	1987	1988	1989
Engineering, total:									
Total, all sources	44,828	48,698	52,690	53,974	54,817	59,031	60,352	61,520	62,379
Federal, total	10,923	11,005	11,903	11,502	11,183	12,308	13,047	13,943	14,102
Dept of Defense	3,139	3,419	3,985	3,780	3,758	4,109	4,568	4,942	4,781
Dept of HHS, total	545	501	575	544	520	532	629	628	718
NIH	446	403	477	466	455	449	515	555	644
Other HHS	99	98	98	78	65	83	114	73	74
NSF	2,366	2,567	2,673	2,685	2,681	3,124	3,477	3,799	3,762
All other Federal	4,873	4,518	4,670	4,493	4,224	4,543	4,373	4,574	4,841
Institutional support	14,102	15,173	16,114	17,107	18,146	20,022	21,036	21,194	22,231
Other outside support, total	6,882	7,637	7,941	8,526	9,499	10,050	9,502	9,773	9,605
All other U.S.	4,729	5,237	5,619	6,357	7,366	7,928	7,574	7,902	7,850
Foreign	2,153	2,400	2,322	2,169	2,133	2,122	1,928	1,871	1,755
Self-support	12,921	14,883	16,732	16,839	15,989	16,651	16,767	16,610	16,441
Chemical engineering:									
Total, all sources	4,921	5,526	5,790	5,656	5,494	5,542	5,632	5,330	5,228
Federal, total	1,290	1,282	1,361	1,314	1,289	1,394	1,501	1,452	1,444
Dept of Defense	56	76	99	92	90	101	150	145	130
Dept of HHS, total	53	52	53	67	53	69	78	83	87
NIH	45	39	41	60	52	67	70	79	87
Other HHS	8	13	12	7	1	2	8	4	0
NSF	519	547	602	606	622	652	692	683	652
All other Federal	662	607	607	549	524	572	581	541	575
Institutional support	1,703	1,936	2,037	2,020	2,007	2,032	2,044	2,010	1,948
Other outside support, total	982	1,171	1,222	1,327	1,343	1,301	1,329	1,284	1,296
All other U.S.	827	1,010	1,042	1,187	1,198	1,177	1,203	1,172	1,203
Foreign	155	161	180	140	145	124	126	112	93
Self-support	946	1,135	1,170	995	855	815	758	584	540
Civil engineering:									
Total, all sources	8,819	9,438	9,917	10,230	9,860	10,092	9,613	9,870	9,840
Federal, total	1,352	1,326	1,339	1,345	1,301	1,363	1,423	1,501	1,400
Dept of Defense	156	155	166	222	254	248	275	322	277
Dept of HHS, total	34	26	26	8	18	28	12	5	18
NIH	10	18	16	8	9	18	8	3	16
Other HHS	24	8	10	0	9	10	4	2	2
NSF	322	383	371	371	356	391	462	419	382
All other Federal	840	762	776	744	673	696	674	755	723
Institutional support	2,685	2,857	2,982	3,069	3,249	3,669	3,620	3,853	3,902
Other outside support, total	1,204	1,162	1,312	1,328	1,305	1,253	1,093	1,103	1,119
All other U.S.	709	655	795	851	875	812	693	683	665
Foreign	495	507	517	477	430	441	400	420	454
Self-support	3,578	4,093	4,284	4,488	4,005	3,807	3,477	3,413	3,419
Electrical engineering:									
Total, all sources	10,156	11,277	12,854	13,461	14,358	15,832	16,457	17,012	17,560
Federal, total	2,490	2,645	2,932	2,730	2,373	2,776	3,017	3,467	3,464
Dept of Defense	1,259	1,410	1,683	1,539	1,290	1,411	1,569	1,655	1,626
Dept of HHS, total	101	86	103	95	81	80	88	124	94
NIH	87	59	77	75	62	57	56	99	73
Other HHS	14	27	26	20	19	23	32	25	21
NSF	522	612	638	598	555	753	846	1,133	1,095
All other Federal	608	537	508	498	447	532	514	555	649
Institutional support	3,307	3,561	3,831	4,259	4,836	5,106	5,458	5,509	6,073
Other outside support, total	1,593	1,690	1,891	2,169	2,357	3,064	2,636	2,676	2,669
All other U.S.	1,205	1,283	1,427	1,666	1,816	2,493	2,132	2,291	2,292
Foreign	388	407	464	503	541	571	504	385	377
Self-support	2,766	3,381	4,200	4,303	4,792	4,886	5,346	5,360	5,354
Industrial engineering:									
Total, all sources	3,432	3,590	3,142	3,276	3,355	3,718	4,073	4,184	4,499
Federal, total	439	350	417	402	385	376	466	553	619
Dept of Defense	154	140	142	129	184	148	211	280	323
Dept of HHS, total	46	53	50	49	45	45	44	39	47
NIH	23	23	31	25	30	14	23	22	25
Other HHS	23	30	19	24	15	31	21	17	22
NSF	47	36	41	56	41	79	97	114	124
All other Federal	192	121	184	168	115	104	114	120	125
Institutional support	1,083	1,183	1,008	1,095	1,184	1,298	1,452	1,433	1,616
Other outside support, total	340	420	308	367	414	440	446	490	466
All other U.S.	152	188	172	256	310	355	369	392	385
Foreign	188	232	136	111	104	85	77	98	81
Self-support	1,570	1,637	1,409	1,412	1,372	1,604	1,709	1,708	1,798

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Table C-15. Full-time science/engineering graduate students
in doctorate-granting institutions
by field and source of major support: 1981-89
-Continued

Field and source of major support	1981	1982	1983	1984	1985	1986	1987	1988	1989
Mechanical engineering:									
Total, all sources	6,337	7,128	8,178	8,511	8,683	9,599	9,966	10,198	10,115
Federal, total	1,413	1,413	1,558	1,633	1,888	2,042	2,258	2,413	2,466
Dept of Defense	291	289	392	379	538	633	770	809	832
Dept of HHS, total	61	65	73	64	89	61	84	70	61
NIH	45	54	65	58	72	52	67	65	54
Other HHS	16	11	8	6	17	9	17	5	7
NSF	296	305	347	384	435	477	591	661	632
All other Federal	765	754	746	806	826	871	813	873	941
Institutional support	2,184	2,426	2,824	3,060	3,070	3,637	3,787	3,713	3,778
Other outside support, total	968	1,099	1,157	1,250	1,595	1,489	1,462	1,513	1,499
All other U.S.	730	855	865	953	1,351	1,247	1,273	1,305	1,331
Foreign	238	244	292	297	244	242	189	208	168
Self-support	1,772	2,190	2,639	2,568	2,130	2,431	2,459	2,559	2,372
Other engineering:									
Total, all sources	11,163	11,741	12,809	12,840	13,067	14,248	14,611	14,926	15,137
Federal, total	3,939	3,989	4,296	4,078	3,947	4,357	4,382	4,557	4,709
Dept of Defense	1,223	1,349	1,503	1,419	1,402	1,568	1,593	1,731	1,593
Dept of HHS, total	250	219	270	261	234	249	323	307	411
NIH	236	210	247	240	230	241	291	287	389
Other HHS	14	9	23	21	4	8	32	20	22
NSF	660	684	674	670	672	772	789	789	877
All other Federal	1,806	1,737	1,849	1,728	1,639	1,768	1,677	1,730	1,828
Institutional support	3,140	3,210	3,432	3,604	3,800	4,280	4,675	4,676	4,914
Other outside support, total	1,795	2,095	2,051	2,085	2,485	2,503	2,536	2,707	2,556
All other U.S.	1,106	1,246	1,318	1,444	1,816	1,844	1,904	2,059	1,974
Foreign	689	849	733	641	669	659	632	648	582
Self-support	2,289	2,447	3,030	3,073	2,835	3,108	3,018	2,986	2,958
Health fields:									
Total, all sources	22,145	20,965	20,526	20,827	21,274	21,300	21,935	22,724	24,350
Federal, total	7,654	6,121	5,532	5,563	5,914	5,799	6,160	6,080	6,415
Dept of Defense	183	191	253	265	271	224	233	234	432
Dept of HHS, total	5,578	4,693	4,100	4,065	4,472	4,371	4,402	4,422	4,385
NIH	1,071	1,230	1,177	1,023	1,046	1,122	1,467	1,415	1,463
Other HHS	4,507	3,463	2,923	3,042	3,426	3,249	2,935	3,007	2,922
NSF	28	34	30	41	41	41	48	46	51
All other Federal	1,865	1,203	1,149	1,192	1,130	1,163	1,477	1,378	1,547
Institutional support	4,318	4,620	4,647	5,053	5,331	5,554	5,604	5,954	6,621
Other outside support, total	1,258	1,281	1,561	1,598	1,631	1,536	1,556	1,281	1,433
All other U.S.	821	846	1,088	1,106	1,106	1,008	1,042	890	954
Foreign	437	435	473	492	525	528	514	391	479
Self-support	8,915	8,943	8,786	8,613	8,398	8,411	8,615	9,409	9,881

SOURCE: National Science Foundation, SRS

Table C-16. Full-time science/engineering graduate students in doctorate-granting institutions by field and type of major support: 1981-89

Field and type of major support	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields:									
Total, all types:	226,921	229,993	236,076	237,460	241,605	250,470	254,865	259,848	267,554
Fellowships and traineeships:	36,236	34,803	34,254	34,300	35,562	36,120	35,573	36,327	37,809
Research assistantships:	51,743	51,532	53,731	56,421	59,896	64,965	69,072	73,237	77,425
Teaching assistantships:	53,619	55,842	57,626	58,833	59,616	60,447	60,788	61,116	62,198
Other types of support:	85,323	87,816	90,465	87,906	86,531	88,938	89,432	89,168	90,122
Sciences, total:									
Total, all types:	159,948	160,330	162,860	162,659	165,514	170,139	172,578	175,604	180,825
Fellowships and traineeships:	23,512	22,682	22,723	22,763	23,598	24,144	23,884	24,871	25,818
Research assistantships:	35,867	35,442	36,659	38,474	39,969	42,329	44,493	47,181	49,995
Teaching assistantships:	43,515	44,808	45,707	46,310	46,900	47,261	47,685	48,061	49,129
Other types of support:	57,054	57,398	57,771	55,112	55,047	56,405	56,516	55,491	55,883
Physical sciences:									
Total, all types:	22,612	23,339	24,502	25,147	25,938	27,069	27,652	27,778	28,396
Fellowships and traineeships:	2,237	2,285	2,288	2,413	2,301	2,376	2,326	2,271	2,545
Research assistantships:	8,538	8,686	9,060	9,517	10,174	10,896	11,455	11,931	12,259
Teaching assistantships:	9,974	10,359	10,904	10,977	11,119	11,324	11,413	11,255	11,432
Other types of support:	1,863	2,009	2,250	2,240	2,344	2,473	2,458	2,321	2,160
Earth, atmospheric, and ocean sciences:									
Total, all types:	10,543	10,918	11,497	11,266	10,871	10,862	10,097	9,837	9,665
Fellowships and traineeships:	1,095	1,140	1,130	1,107	1,131	974	896	908	849
Research assistantships:	3,404	3,265	3,480	3,506	3,668	3,786	3,619	3,835	4,032
Teaching assistantships:	2,541	2,737	2,752	2,743	2,533	2,539	2,397	2,446	2,375
Other types of support:	3,503	3,776	4,135	3,910	3,539	3,563	3,185	2,648	2,409
Mathematical sciences:									
Total, all types:	9,688	10,178	10,316	10,613	11,160	11,727	12,364	12,840	13,111
Fellowships and traineeships:	799	788	800	901	992	1,032	1,030	1,124	1,196
Research assistantships:	733	823	776	846	969	1,012	1,072	1,175	1,244
Teaching assistantships:	5,537	5,817	6,140	6,325	6,545	6,897	7,207	7,344	7,562
Other types of support:	2,619	2,750	2,600	2,541	2,654	2,786	3,055	3,197	3,109
Computer sciences:									
Total, all types:	6,472	7,911	9,276	10,108	12,374	13,389	13,639	13,701	14,088
Fellowships and traineeships:	473	463	524	612	807	893	837	874	1,061
Research assistantships:	1,068	1,151	1,367	1,582	2,017	2,284	2,782	2,971	3,106
Teaching assistantships:	1,745	1,957	2,312	2,646	3,084	3,109	3,258	3,297	3,307
Other types of support:	3,186	4,340	5,073	5,268	6,466	7,103	6,762	6,559	6,614
Agricultural sciences:									
Total, all types:	9,656	9,519	9,420	9,323	8,721	8,852	8,611	8,588	8,568
Fellowships and traineeships:	793	779	759	666	657	636	543	504	535
Research assistantships:	4,647	4,558	4,509	4,608	4,306	4,590	4,492	4,399	4,607
Teaching assistantships:	805	883	879	837	824	752	730	832	748
Other types of support:	3,411	3,299	3,273	3,212	2,934	2,874	2,846	2,853	2,678
Biological sciences:									
Total, all types:	35,504	35,248	35,234	35,688	35,696	36,609	37,223	38,244	39,461
Fellowships and traineeships:	7,981	7,850	7,946	7,995	8,194	8,437	8,695	8,852	9,230
Research assistantships:	9,815	9,776	10,023	10,797	11,123	11,977	12,829	13,995	15,103
Teaching assistantships:	9,039	9,152	8,972	8,918	8,913	8,605	8,320	8,234	8,475
Other types of support:	8,669	8,470	8,293	7,978	7,466	7,590	7,379	7,163	6,653
Psychology:									
Total, all types:	22,245	21,900	22,150	21,600	21,334	21,995	22,558	23,308	24,727
Fellowships and traineeships:	3,167	2,916	2,546	2,634	2,762	2,601	2,549	2,597	2,521
Research assistantships:	2,674	2,522	2,669	2,759	2,864	2,884	2,977	3,469	3,616
Teaching assistantships:	4,602	4,547	4,633	4,660	4,797	4,986	5,003	5,135	5,323
Other types of support:	11,802	11,915	12,302	11,547	10,911	11,524	12,029	12,107	13,267
Social sciences:									
Total, all types:	43,228	41,317	40,465	38,914	39,420	39,636	40,434	41,308	42,809
Fellowships and traineeships:	6,967	6,461	6,730	6,435	6,754	7,195	7,008	7,741	7,881
Research assistantships:	4,988	4,661	4,775	4,859	4,848	4,900	5,267	5,406	6,028
Teaching assistantships:	9,272	9,356	9,115	9,204	9,085	9,049	9,357	9,518	9,907
Other types of support:	22,001	20,839	19,845	18,416	18,733	18,492	18,802	18,643	18,993

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Table C-16. Full-time science/engineering graduate students in doctorate-granting institutions by field and type of major support: 1981-89 -Continued

Field and type of major support	1981	1982	1983	1984	1985	1986	1987	1988	1989
Engineering, total:									
Total, all types:	44,828	48,698	52,690	53,974	54,817	59,031	60,352	61,520	62,379
Fellowships and traineeships:	5,033	5,417	5,495	5,516	5,485	5,693	5,497	5,349	5,677
Research assistantships:	14,395	14,595	15,539	16,186	17,828	20,360	22,005	23,277	24,355
Teaching assistantships:	8,155	8,955	9,864	10,327	10,546	10,915	10,910	10,885	10,787
Other types of support:	17,245	19,731	21,792	21,945	20,958	22,063	21,940	22,009	21,560
Chemical engineering:									
Total, all types:	4,921	5,524	5,790	5,656	5,494	5,542	5,632	5,330	5,228
Fellowships and traineeships:	797	1,021	1,013	1,025	938	926	922	808	791
Research assistantships:	2,018	2,097	2,253	2,325	2,454	2,581	2,745	2,813	2,810
Teaching assistantships:	935	1,033	1,120	1,113	1,057	993	990	949	896
Other types of support:	1,171	1,373	1,404	1,193	1,045	1,042	975	760	731
Civil engineering:									
Total, all types:	8,819	9,438	9,917	10,230	9,860	10,092	9,613	9,870	9,840
Fellowships and traineeships:	831	799	784	693	845	861	739	754	838
Research assistantships:	2,197	2,104	2,334	2,480	2,469	2,849	2,905	3,058	3,027
Teaching assistantships:	1,299	1,479	1,485	1,613	1,646	1,731	1,730	1,711	1,673
Other types of support:	4,492	5,056	5,314	5,444	4,900	4,651	4,239	4,347	4,302
Electrical engineering:									
Total, all types:	10,156	11,277	12,854	13,461	14,358	15,832	16,457	17,012	17,560
Fellowships and traineeships:	1,099	1,159	1,175	1,235	1,282	1,335	1,176	1,169	1,317
Research assistantships:	2,860	2,933	3,180	3,129	3,643	4,411	5,053	5,655	6,049
Teaching assistantships:	2,368	2,539	2,972	3,211	3,238	3,429	3,289	3,264	3,351
Other types of support:	3,829	4,646	5,527	5,886	6,195	6,657	6,939	6,924	6,843
Industrial engineering:									
Total, all types:	3,432	3,590	3,142	3,276	3,355	3,718	4,073	4,184	4,499
Fellowships and traineeships:	305	327	213	215	219	213	243	219	249
Research assistantships:	539	535	421	534	556	691	906	1,004	1,110
Teaching assistantships:	617	712	644	693	821	852	789	748	817
Other types of support:	1,971	2,016	1,864	1,834	1,759	1,962	2,135	2,213	2,323
Mechanical engineering:									
Total, all types:	6,337	7,128	8,178	8,511	8,683	9,599	9,966	10,198	10,115
Fellowships and traineeships:	636	706	737	761	751	803	773	724	752
Research assistantships:	2,134	2,200	2,347	2,632	3,254	3,661	3,926	4,053	4,222
Teaching assistantships:	1,440	1,639	1,971	2,032	2,037	2,134	2,193	2,233	2,193
Other types of support:	2,127	2,583	3,123	3,086	2,641	3,001	3,074	3,188	2,948
Other engineering:									
Total, all types:	11,163	11,741	12,809	12,840	13,067	14,248	14,611	14,926	15,137
Fellowships and traineeships:	1,365	1,405	1,573	1,587	1,450	1,555	1,644	1,675	1,730
Research assistantships:	4,647	4,726	5,004	5,086	5,452	6,167	6,470	6,694	7,137
Teaching assistantships:	1,496	1,553	1,672	1,665	1,747	1,776	1,919	1,980	1,857
Other types of support:	3,655	4,057	4,560	4,502	4,418	4,750	4,578	4,577	4,413
Health fields:									
Total, all types:	22,145	20,965	20,526	20,827	21,274	21,300	21,935	22,724	24,350
Fellowships and traineeships:	7,691	6,704	6,036	6,021	6,479	6,283	6,192	6,107	6,314
Research assistantships:	1,481	1,495	1,533	1,761	2,099	2,276	2,574	2,779	3,075
Teaching assistantships:	1,949	2,079	2,055	2,196	2,170	2,271	2,193	2,170	2,282
Other types of support:	11,024	10,687	10,902	10,849	10,526	10,470	10,976	11,668	12,679

SOURCE: National Science Foundation, SRS

Table C-17. Full-time science/engineering graduate students in doctorate-granting institutions by type and source of major support: 1981-89

Type and source of major support	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all types:									
Total, all sources	226,921	229,993	236,076	237,460	241,605	250,470	254,865	259,848	267,554
Federal, total	49,951	46,401	46,763	46,768	48,102	50,407	52,681	54,608	56,712
Dept of Defense	5,623	5,842	6,871	7,020	7,214	7,836	8,689	9,424	9,248
Dept of HHS, total	17,380	15,562	14,751	14,864	15,616	16,153	16,982	17,737	18,429
NIH	11,081	10,700	10,718	10,884	11,038	11,815	12,920	13,732	14,391
Other HHS	6,299	4,862	4,033	3,980	4,578	4,338	4,062	4,005	4,038
NSF	9,091	9,205	9,465	9,802	10,149	10,808	11,212	11,597	11,829
All other Federal	17,857	15,792	15,676	15,082	15,123	15,610	15,798	15,850	17,206
Institutional support	88,830	91,456	94,085	97,782	100,213	105,446	108,399	111,019	115,191
Other outside support, total	21,892	23,418	24,011	24,167	26,008	26,097	24,785	25,053	25,097
All other U.S.	13,404	14,696	15,364	16,238	18,439	18,654	17,953	18,441	18,905
Foreign	8,488	8,722	8,647	7,929	7,569	7,443	6,832	6,612	6,192
Self-support	66,248	68,718	71,217	68,743	67,282	68,520	69,000	69,168	70,554
Fellowships:									
Total, all sources	19,829	20,573	21,122	21,339	22,382	23,084	22,025	22,418	23,815
Federal, total	4,006	4,034	3,987	3,983	4,311	4,483	4,356	4,501	5,238
Dept of Defense	181	201	257	237	260	293	351	349	517
Dept of HHS, total	946	834	756	770	871	819	859	883	941
NIH	669	624	555	591	632	651	696	707	723
Other HHS	277	210	201	179	239	168	163	176	218
NSF	1,255	1,302	1,303	1,341	1,394	1,510	1,482	1,586	1,777
All other Federal	1,624	1,697	1,671	1,635	1,786	1,861	1,664	1,683	2,003
Institutional support	9,097	9,238	9,823	10,148	11,088	11,804	11,647	12,026	12,639
Other outside support, total	6,726	7,301	7,312	7,208	6,983	6,797	6,022	5,891	5,938
All other U.S.	3,156	3,599	3,752	4,066	4,172	4,100	3,670	3,432	3,616
Foreign	3,570	3,702	3,560	3,142	2,811	2,697	2,352	2,459	2,322
Self-support	0	0	0	0	0	0	0	0	0
Traineeships:									
Total, all sources	16,407	14,230	13,132	12,961	13,180	13,036	13,548	13,909	13,994
Federal, total	11,929	9,818	8,935	8,678	8,656	8,436	8,675	8,440	8,483
Dept of Defense	76	33	79	61	49	79	136	136	118
Dept of HHS, total	9,886	8,551	7,586	7,365	7,443	7,221	7,150	7,053	6,882
NIH	4,664	4,609	4,475	4,274	4,055	3,919	4,234	4,116	4,074
Other HHS	5,222	3,942	3,111	3,091	3,388	3,302	2,916	2,937	2,808
NSF	134	72	47	42	56	27	82	68	89
All other Federal	1,833	1,162	1,223	1,210	1,108	1,109	1,307	1,183	1,394
Institutional support	3,410	3,314	3,127	3,330	3,570	3,697	4,002	4,536	4,585
Other outside support, total	1,068	1,098	1,070	953	954	903	871	933	926
All other U.S.	800	802	721	690	662	700	626	694	653
Foreign	268	296	349	263	292	203	245	239	273
Self-support	0	0	0	0	0	0	0	0	0
Research assistantships:									
Total, all sources	51,743	51,532	53,731	56,421	59,896	64,965	69,072	73,237	77,425
Federal, total	28,915	28,002	28,848	29,131	30,137	32,485	34,735	36,474	37,890
Dept of Defense	3,280	3,458	3,919	4,050	4,167	4,627	5,581	5,959	5,752
Dept of HHS, total	5,992	5,709	5,909	6,263	6,807	7,626	8,398	9,278	10,060
NIH	5,449	5,205	5,365	5,682	6,058	6,922	7,573	8,495	9,160
Other HHS	543	504	544	581	749	704	825	783	900
NSF	7,577	7,722	8,028	8,249	8,531	9,070	9,464	9,794	9,808
All other Federal	12,066	11,113	10,992	10,569	10,632	11,162	11,292	11,443	12,270
Institutional support	16,527	16,739	17,138	18,757	19,626	22,260	24,164	25,584	27,924
Other outside support, total	6,301	6,791	7,745	8,533	10,133	10,220	10,173	11,179	11,611
All other U.S.	5,703	6,210	7,187	7,934	9,588	9,634	9,568	10,563	10,957
Foreign	598	581	558	599	545	586	605	616	654
Self-support	0	0	0	0	0	0	0	0	0
Teaching assistantships:									
Total, all sources	53,619	55,842	57,626	58,833	59,616	60,447	60,788	61,116	62,198
Federal, total	547	380	469	379	537	458	433	431	486
Dept of Defense	0	0	0	0	0	0	0	0	0
Dept of HHS, total	117	100	111	71	96	110	153	135	154
NIH	74	49	74	44	57	82	125	110	139
Other HHS	43	51	37	27	39	28	28	25	15
NSF	58	24	25	24	43	73	26	53	63
All other Federal	372	256	333	284	398	275	254	243	269
Institutional support	52,698	55,035	56,790	58,063	58,594	59,498	59,917	60,240	61,206
Other outside support, total	374	427	367	391	485	491	438	445	506
All other U.S.	374	427	367	391	485	491	438	445	506
Foreign	0	0	0	0	0	0	0	0	0
Self-support	0	0	0	0	0	0	0	0	0
Other types of support:									
Total, all sources	85,323	87,816	90,465	87,906	86,531	88,938	89,432	89,168	90,122
Federal, total	4,554	4,167	4,524	4,597	4,461	4,545	4,482	4,762	4,615
Dept of Defense	2,086	2,150	2,616	2,672	2,738	2,837	2,621	2,980	2,861
Dept of HHS, total	439	368	389	395	399	377	422	388	392
NIH	225	213	249	293	236	241	292	304	295
Other HHS	214	155	140	102	163	136	130	84	97
NSF	67	85	62	146	125	128	158	96	92
All other Federal	1,962	1,564	1,457	1,384	1,199	1,203	1,281	1,298	1,270
Institutional support	7,098	7,130	7,207	7,484	7,335	8,187	8,669	8,633	8,837
Other outside support, total	7,423	7,801	7,517	7,082	7,453	7,686	7,281	6,605	6,116
All other U.S.	3,371	3,658	3,337	3,157	3,532	3,729	3,651	3,307	3,173
Foreign	4,052	4,143	4,180	3,925	3,921	3,957	3,630	3,298	2,943
Self-support	66,248	68,718	71,217	68,743	67,282	68,520	69,000	69,168	70,554

SOURCE: National Science Foundation, SRS

Table C-18. Full-time science/engineering graduate students with U.S. citizenship in doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	174,467	174,836	176,607	176,565	175,919	177,961	178,779	178,955	184,166
Total, science/engineering fields	154,409	156,035	158,335	157,938	157,088	159,262	159,528	159,209	162,992
Engineering, total	25,624	27,881	30,451	31,367	31,319	32,623	32,961	32,695	33,266
Aerospace	882	944	1,078	1,104	1,249	1,332	1,547	1,491	1,689
Agricultural	374	398	425	446	414	457	478	406	361
Biomedical	696	709	817	886	924	1,001	976	971	1,007
Chemical	2,755	3,203	3,589	3,560	3,305	3,387	3,341	2,954	2,664
Civil	5,220	5,496	5,660	5,803	5,409	5,406	5,065	5,115	5,052
Electrical	5,542	6,268	7,191	7,679	7,943	8,372	8,643	8,960	9,418
Engineering science	836	816	846	772	780	838	777	801	747
Industrial	1,931	2,060	1,834	1,867	1,803	1,983	2,099	2,179	2,359
Mechanical	3,328	3,684	4,247	4,509	4,778	5,126	5,409	5,195	5,483
Metallurgical/materials	1,330	1,280	1,520	1,659	1,794	1,824	1,786	1,764	1,851
Mining	222	234	251	262	237	230	214	173	142
Nuclear	605	569	591	606	600	614	594	644	628
Petroleum	198	214	321	318	311	290	310	226	198
Engineering, n.e.c.	1,705	2,006	2,081	1,896	1,772	1,763	1,722	1,816	1,667
Sciences, total	128,785	128,154	127,884	126,571	125,769	126,639	126,567	126,514	129,726
Physical sciences	16,531	17,047	17,458	17,719	17,685	17,778	17,856	17,529	17,541
Astronomy	472	488	480	479	485	494	509	545	604
Chemistry	10,104	10,675	11,092	11,076	11,109	11,141	10,930	10,392	10,248
Physics	5,903	5,836	5,836	6,044	5,974	6,039	6,280	6,510	6,614
Physical sciences, n.e.c.	52	48	50	120	117	104	137	82	75
Earth, atmospheric, and ocean sciences	9,076	9,313	9,842	9,716	9,236	9,000	8,157	7,695	7,383
Atmospheric sciences	560	585	598	609	672	648	603	595	570
Geosciences	5,967	6,382	7,000	6,913	6,435	6,106	5,325	4,886	4,480
Oceanography	1,344	1,213	1,171	1,221	1,208	1,263	1,247	1,139	1,229
Earth, atm. & oc. sci., n.e.c.	1,205	1,133	1,073	973	921	983	982	1,075	1,104
Mathematical sciences	6,162	6,457	6,236	6,266	6,509	6,776	7,071	7,250	7,326
Computer sciences	4,266	5,139	5,763	6,109	7,481	7,943	7,929	7,671	7,765
Agricultural sciences	7,367	7,237	7,046	7,019	6,436	6,372	6,064	6,045	6,104
Biological sciences	30,853	30,371	29,889	30,065	29,492	29,560	29,312	29,330	29,610
Anatomy	877	849	847	878	800	772	787	805	809
Biochemistry	3,160	3,178	3,214	3,402	3,502	3,557	3,421	3,445	3,410
Biology	7,024	6,891	6,680	6,557	6,206	6,198	6,187	6,245	6,538
Biometry/epidemiology	839	769	720	628	823	832	861	876	875
Biophysics	396	353	357	339	288	329	343	365	402
Botany	2,489	2,554	2,411	2,357	2,191	2,108	1,915	1,772	1,697
Cell biology	907	1,007	1,010	1,062	1,217	1,380	1,567	1,626	1,682
Ecology	859	825	758	778	764	745	675	700	738
Entomology/parasitology	1,189	1,113	1,065	1,040	904	855	767	775	718
Genetics	736	766	777	811	851	927	926	886	944
Microbiology	3,052	3,068	3,176	3,271	3,220	3,133	3,222	3,379	3,297
Nutrition	2,301	2,212	2,080	2,037	2,023	2,062	1,963	1,813	1,783
Pathology	866	842	857	909	840	862	870	869	865
Pharmacology	1,714	1,696	1,758	1,742	1,800	1,703	1,608	1,611	1,699
Physiology	1,744	1,617	1,554	1,714	1,721	1,687	1,646	1,561	1,517
Zoology	2,096	1,989	1,885	1,700	1,521	1,520	1,552	1,447	1,498
Biosciences, n.e.c.	604	642	740	840	821	890	1,002	1,155	1,138
Psychology	21,386	20,964	21,214	20,676	20,302	20,964	21,469	22,098	23,495
Social sciences	33,144	31,626	30,436	29,001	28,628	28,246	28,709	28,896	30,502
Agricultural economics	1,258	1,266	1,269	1,249	1,206	1,191	1,109	1,030	1,033
Anthropology	3,822	3,648	3,470	3,516	3,353	3,461	3,446	3,540	3,697
Economics (except agricultural)	5,565	5,722	5,483	5,072	4,812	4,746	4,637	4,474	4,540
Geography	1,705	1,612	1,657	1,638	1,601	1,571	1,663	1,591	1,702
History and philosophy of science	187	188	189	201	176	198	226	221	240
Linguistics	1,499	1,436	1,479	1,435	1,368	1,366	1,464	1,481	1,409
Political science	10,265	9,861	9,447	8,791	9,158	9,124	8,963	9,189	10,135
Sociology	4,083	3,684	3,492	3,387	3,196	3,147	3,464	3,447	3,643
Sociology/anthropology	426	480	469	451	406	427	404	417	474
Social sciences, n.e.c.	4,334	3,729	3,481	3,261	3,352	3,015	3,333	3,506	3,629
Total, health fields	20,058	18,801	18,272	18,627	18,831	18,699	19,251	19,746	21,174
Dentistry	588	598	579	638	590	646	764	774	838
Neurology	161	176	217	270	288	322	401	488	564
Nursing	6,526	5,999	5,577	5,522	5,385	5,226	5,193	5,169	5,158
Pharmaceutical sciences	1,148	1,115	1,076	1,067	1,083	1,082	1,070	1,031	1,123
Preventive medicine/community health	3,865	3,334	3,213	3,258	3,305	3,238	3,305	3,314	3,309
Speech pathology/audiology	4,229	4,301	4,193	4,248	4,393	4,216	3,910	4,096	4,397
Veterinary sciences	243	271	239	295	367	351	422	432	464
Clinical medicine, n.e.c.	814	853	845	872	939	920	978	1,037	1,149
Health related, n.e.c.	2,484	2,154	2,333	2,457	2,481	2,698	3,208	3,405	4,172

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-19. Foreign full-time science/engineering graduate students in doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	52,454	55,157	59,469	60,895	65,686	72,509	76,086	80,893	83,388
Total, science/engineering fields	50,367	52,993	57,215	58,695	63,243	69,908	73,402	77,915	80,212
Engineering, total	19,204	20,817	22,239	22,607	23,498	26,408	27,391	28,825	29,113
Aerospace	598	575	747	736	731	806	808	1,026	999
Agricultural	298	341	341	327	353	424	446	473	490
Biomedical	157	199	195	220	193	279	376	431	565
Chemical	2,166	2,321	2,201	2,096	2,189	2,155	2,291	2,376	2,564
Civil	3,599	3,942	4,257	4,427	4,451	4,686	4,548	4,755	4,788
Electrical	4,614	5,009	5,663	5,782	6,415	7,460	7,814	8,052	8,142
Engineering science	368	436	493	484	466	589	592	620	517
Industrial	1,501	1,530	1,308	1,409	1,552	1,735	1,974	2,005	2,140
Mechanical	3,009	3,444	3,931	4,002	3,905	4,473	4,557	5,003	4,632
Metallurgical/materials	1,106	1,173	1,166	1,204	1,276	1,493	1,584	1,634	1,806
Mining	150	117	153	141	134	189	192	206	187
Nuclear	427	473	461	412	430	445	450	461	484
Petroleum	192	256	286	284	240	261	309	344	296
Engineering, n.e.c.	1,019	1,001	1,037	1,083	1,163	1,413	1,450	1,439	1,503
Sciences, total	31,163	32,176	34,976	36,088	39,745	43,500	46,011	49,090	51,099
Physical sciences	6,081	6,292	7,044	7,428	8,253	9,291	9,796	10,249	10,855
Astronomy	93	102	105	117	150	160	172	160	158
Chemistry	3,066	3,080	3,403	3,539	3,958	4,396	4,805	5,190	5,562
Physics	2,915	3,105	3,525	3,756	4,129	4,714	4,798	4,863	5,114
Physical sciences, n.e.c.	7	5	11	16	16	21	21	36	21
Earth, atmospheric, and ocean sciences	1,467	1,605	1,655	1,550	1,635	1,862	1,940	2,142	2,282
Atmospheric sciences	179	186	180	161	195	206	219	230	233
Geosciences	877	903	908	884	915	1,004	1,086	1,174	1,261
Oceanography	245	338	376	297	312	389	356	437	507
Earth, atm. & oc. sci., n.e.c.	166	178	191	208	213	263	279	301	281
Mathematical sciences	3,526	3,721	4,080	4,347	4,651	4,951	5,293	5,590	5,785
Computer sciences	2,206	2,772	3,513	3,999	4,893	5,446	5,710	6,030	6,323
Agricultural sciences	2,289	2,282	2,374	2,304	2,285	2,480	2,547	2,543	2,464
Biological sciences	4,651	4,877	5,345	5,623	6,204	7,049	7,911	8,914	9,851
Anatomy	86	88	74	58	91	121	153	180	221
Biochemistry	589	654	767	843	969	1,092	1,204	1,314	1,486
Biology	744	748	839	978	988	1,150	1,270	1,426	1,602
Biometry/epidemiology	160	150	157	123	173	223	263	300	303
Biophysics	61	70	80	80	93	120	125	179	208
Botany	535	589	602	612	623	736	757	877	855
Cell biology	82	103	128	147	189	275	333	402	471
Ecology	72	80	77	87	100	99	109	122	134
Entomology/parasitology	263	227	240	224	234	252	295	286	291
Genetics	90	111	142	131	163	202	241	260	296
Microbiology	410	431	504	532	647	720	813	953	1,052
Nutrition	800	821	802	858	893	866	929	945	954
Pathology	184	172	206	168	189	203	250	248	289
Pharmacology	199	243	244	255	264	333	396	459	515
Physiology	180	188	212	255	265	318	350	447	540
Zoology	131	129	140	144	178	188	223	261	268
Biosciences, n.e.c.	65	73	131	128	145	151	200	255	366
Psychology	859	936	936	924	1,032	1,031	1,089	1,210	1,232
Social sciences	10,084	9,691	10,029	9,913	10,792	11,390	11,725	12,412	12,307
Agricultural economics	757	690	725	726	740	724	714	848	852
Anthropology	422	379	396	384	442	535	581	649	640
Economics (except agricultural)	3,524	3,365	3,376	3,406	3,802	3,936	4,090	4,335	4,365
Geography	347	375	368	359	349	371	411	391	406
History and philosophy of science	30	35	40	42	51	39	41	45	43
Linguistics	752	709	837	829	935	941	924	957	980
Political science	2,347	2,318	2,440	2,287	2,413	2,743	2,707	2,794	2,546
Sociology	1,018	964	1,074	1,037	1,165	1,200	1,279	1,381	1,339
Sociology/anthropology	98	132	127	121	128	123	123	121	133
Social sciences, n.e.c.	789	724	646	722	767	778	855	891	1,003
Total, health fields	2,087	2,164	2,254	2,200	2,443	2,601	2,684	2,978	3,176
Dentistry	173	129	122	130	155	179	145	156	170
Neurology	14	12	27	29	34	48	69	100	101
Nursing	220	197	149	160	151	153	157	164	160
Pharmaceutical sciences	539	587	619	630	633	681	676	797	892
Preventive medicine/community health	578	695	713	657	785	794	807	859	862
Speech pathology/audiology	209	187	236	191	202	235	210	237	241
Veterinary sciences	107	85	98	107	124	135	153	157	185
Clinical medicine, n.e.c.	113	136	150	106	178	174	198	218	232
Health related, n.e.c.	134	136	140	190	181	202	269	290	333

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-20. Part-time science/engineering graduate students in doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	102,781	106,228	106,995	108,971	114,417	116,693	117,596	117,826	117,471
Total, science/engineering fields	87,225	89,842	90,199	90,965	95,988	96,748	97,657	96,994	95,655
Engineering, total	29,560	29,495	32,634	33,141	35,422	36,763	36,650	35,218	34,619
Aerospace	396	414	551	573	646	753	731	764	750
Agricultural	130	136	203	181	174	173	139	160	180
Biomedical	159	156	173	182	200	201	261	274	281
Chemical	1,343	1,405	1,562	1,540	1,521	1,349	1,358	1,202	1,084
Civil	4,497	4,108	4,512	4,522	4,578	4,402	4,251	4,281	4,293
Electrical	8,744	9,305	10,691	11,138	12,017	12,108	12,571	12,766	12,798
Engineering science	549	588	642	644	592	701	758	768	809
Industrial	5,756	5,418	5,652	5,664	6,755	7,390	7,674	6,726	6,011
Mechanical	3,576	3,639	3,911	4,455	4,563	5,008	5,124	4,852	4,790
Metallurgical/materials	611	577	652	709	748	722	817	766	767
Mining	72	73	94	74	92	68	78	71	90
Nuclear	251	259	151	216	190	206	235	198	211
Petroleum	128	110	117	130	201	175	171	141	157
Engineering, n.e.c.	3,348	3,307	3,723	3,113	3,145	3,507	2,482	2,249	2,398
Sciences, total	57,665	60,347	57,565	57,824	60,566	59,985	61,007	61,776	61,036
Physical sciences	3,181	3,172	3,245	3,263	3,374	3,474	3,315	3,434	3,348
Astronomy	32	42	33	43	36	35	41	26	27
Chemistry	2,084	2,038	2,053	1,984	2,085	2,065	1,932	1,900	1,873
Physics	1,049	1,074	1,151	1,185	1,194	1,261	1,252	1,414	1,355
Physical sciences, n.e.c.	16	18	8	51	59	113	90	94	93
Earth, atmospheric, and ocean sciences	2,572	2,886	2,784	3,020	3,346	3,127	3,271	3,034	2,976
Atmospheric sciences	134	106	106	125	84	102	126	104	97
Geosciences	1,445	1,763	1,780	1,919	2,183	2,066	1,974	1,844	1,796
Oceanography	344	383	360	411	464	375	419	350	325
Earth, atm. & oc. sci., n.e.c.	649	634	538	565	615	584	752	736	758
Mathematical sciences	4,342	4,592	4,569	4,454	4,108	3,936	3,857	4,104	3,885
Computer sciences	6,677	7,672	9,030	10,258	11,449	11,815	12,444	13,041	12,500
Agricultural sciences	1,717	2,077	2,118	2,004	1,959	1,823	1,728	1,714	1,799
Biological sciences	6,558	6,668	6,375	6,275	6,794	6,760	6,425	6,392	6,327
Anatomy	109	137	116	93	102	80	87	83	79
Biochemistry	273	258	213	215	186	227	178	167	234
Biology	2,441	2,249	2,032	2,001	2,357	2,420	2,167	2,121	1,961
Biometry/epidemiology	183	247	279	253	364	386	382	455	499
Biophysics	6	17	13	14	60	98	123	48	45
Botany	433	459	392	402	493	398	423	390	408
Cell biology	29	33	44	47	23	61	78	55	62
Ecology	117	113	127	169	114	112	115	141	165
Entomology/parasitology	212	200	170	174	204	199	182	179	172
Genetics	61	63	67	70	61	90	106	101	81
Microbiology	427	493	457	426	475	427	362	412	444
Nutrition	1,042	1,091	1,211	1,128	1,089	1,059	1,084	1,169	1,180
Pathology	354	399	356	347	279	268	266	226	217
Pharmacology	100	134	132	120	115	121	149	139	133
Physiology	220	253	228	191	225	215	217	212	149
Zoology	357	353	365	422	404	357	322	314	309
Biosciences, n.e.c.	194	169	173	203	243	242	184	180	189
Psychology	7,645	8,097	7,861	8,433	9,156	8,661	8,893	9,095	8,774
Social sciences	24,973	25,183	21,583	20,117	20,380	20,389	21,074	20,962	21,427
Agricultural economics	220	267	243	237	254	260	329	331	342
Anthropology	1,561	1,661	1,533	1,471	1,603	1,586	1,571	1,511	1,605
Economics (except agricultural)	3,318	3,565	3,156	3,034	2,777	2,570	2,530	2,532	2,526
Geography	692	731	615	607	592	649	628	656	734
History and philosophy of science	31	33	24	31	45	29	27	22	31
Linguistics	759	529	497	656	501	512	532	443	530
Political science	11,460	11,676	10,609	9,280	9,887	10,001	10,827	10,439	10,633
Sociology	1,949	2,022	1,810	1,698	1,641	1,554	1,587	1,624	1,676
Sociology/anthropology	497	430	418	388	372	354	355	374	339
Social sciences, n.e.c.	4,486	4,269	2,678	2,715	2,708	2,865	2,688	3,030	3,011
Total, health fields	15,556	16,386	16,796	18,006	18,429	19,945	19,939	20,832	21,816
Dentistry	181	109	75	82	90	113	148	155	149
Neurology	2	2	3	4	2	3	2	3	16
Nursing	7,386	8,165	9,260	10,231	10,196	10,815	10,683	10,959	11,664
Pharmaceutical sciences	851	806	859	731	743	830	779	703	748
Preventive medicine/community health	2,687	2,647	2,566	2,742	3,016	3,007	3,247	3,356	3,434
Speech pathology/audiology	2,146	2,287	1,500	1,485	1,539	1,688	1,527	1,631	1,580
Veterinary sciences	108	90	103	129	119	121	136	146	133
Clinical medicine, n.e.c.	289	332	306	329	386	365	383	398	300
Health related, n.e.c.	1,906	1,948	2,124	2,273	2,338	3,003	3,034	3,481	3,792

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-21. Science/engineering postdoctorates in doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	19,647	19,363	20,727	21,466	22,447	23,810	24,996	26,237	28,157
Total, science/engineering fields	14,782	14,673	15,699	16,214	16,976	17,993	18,951	19,912	21,230
Engineering, total	1,040	978	1,101	1,194	1,347	1,398	1,442	1,684	1,879
Aerospace	14	25	32	42	51	48	43	48	38
Agricultural	9	6	4	8	15	17	29	31	38
Biomedical	34	31	28	34	47	52	44	47	67
Chemical	171	174	198	245	273	295	310	423	438
Civil	107	108	131	146	122	140	175	203	182
Electrical	191	176	174	171	176	172	175	186	193
Engineering science	87	76	71	63	90	67	42	38	74
Industrial	13	9	13	21	18	25	26	32	38
Mechanical	130	130	182	196	207	241	216	216	302
Metallurgical/materials	193	166	204	168	245	249	282	325	323
Mining	16	10	19	18	19	25	26	63	90
Nuclear	26	18	15	19	31	31	20	17	36
Petroleum	2	4	1	4	6	1	10	8	9
Engineering, n.e.c.	47	45	29	59	47	35	44	47	51
Sciences, total	13,742	13,695	14,598	15,020	15,629	16,595	17,509	18,228	19,351
Physical sciences	4,462	4,281	4,444	4,386	4,517	4,843	4,953	5,187	5,332
Astronomy	132	148	111	118	138	133	125	147	186
Chemistry	2,870	2,805	2,973	2,906	2,995	3,151	3,246	3,429	3,473
Physics	1,445	1,326	1,350	1,320	1,342	1,527	1,548	1,578	1,644
Physical sciences, n.e.c.	15	2	10	42	42	32	34	33	29
Earth, atmospheric, and ocean sciences	339	335	415	488	375	417	420	499	486
Atmospheric sciences	46	32	41	74	48	43	58	71	58
Geosciences	213	216	237	250	226	247	239	279	293
Oceanography	67	78	120	151	79	98	81	116	115
Earth, atm. & oc. sci., n.e.c.	13	9	17	13	22	29	42	33	20
Mathematical sciences	113	194	170	203	226	201	228	280	223
Computer sciences	34	46	82	63	74	74	100	91	78
Agricultural sciences	284	279	295	358	357	388	414	422	483
Biological sciences	7,707	7,756	8,404	8,758	9,226	9,816	10,554	10,931	11,830
Anatomy	248	261	284	282	310	342	350	405	504
Biochemistry	1,724	1,684	1,750	1,789	1,866	1,989	2,121	2,090	2,254
Biology	871	942	1,013	1,127	1,128	1,101	1,189	1,232	1,290
Biometry/epidemiology	64	53	54	67	59	99	78	76	104
Biophysics	155	129	183	121	101	133	116	124	143
Botany	240	298	369	347	371	394	435	475	480
Cell biology	532	516	653	648	723	812	922	917	983
Ecology	44	28	39	36	37	37	39	33	52
Entomology/parasitology	133	119	112	113	139	143	162	176	219
Genetics	298	314	344	382	377	428	493	504	535
Microbiology	967	1,014	1,025	1,071	1,168	1,255	1,310	1,405	1,539
Nutrition	171	138	150	150	202	185	177	141	130
Pathology	468	540	584	607	619	709	765	819	912
Pharmacology	755	777	835	848	901	934	964	1,079	1,179
Physiology	758	673	754	817	833	896	1,019	1,034	1,077
Zoology	207	203	183	157	212	217	214	209	214
Biosciences, n.e.c.	72	67	72	196	180	142	200	212	215
Psychology	471	520	435	422	498	520	458	497	538
Social sciences	332	284	353	342	356	336	382	321	381
Agricultural economics	6	10	28	18	31	35	31	20	28
Anthropology	30	34	60	57	57	52	54	56	74
Economics (except agricultural)	30	13	20	26	19	22	36	9	33
Geography	23	5	7	14	10	11	18	22	22
History and philosophy of science	21	14	19	12	11	11	19	16	12
Linguistics	47	47	51	30	26	21	42	36	30
Political science	46	44	43	31	44	66	54	50	41
Sociology	90	89	99	114	92	84	93	73	83
Sociology/anthropology	0	2	1	0	2	1	3	1	0
Social sciences, n.e.c.	39	26	25	40	64	33	32	38	58
Total, health fields	4,865	4,690	5,028	5,252	5,471	5,817	6,045	6,325	6,927
Dentistry	139	246	190	171	201	89	64	87	43
Neurology	287	254	301	352	332	369	420	474	453
Nursing	8	0	6	14	17	16	49	30	36
Pharmaceutical sciences	243	238	207	237	272	330	345	396	416
Preventive medicine/community health	135	143	157	186	177	209	180	156	192
Speech pathology/audiology	19	10	18	18	18	12	25	26	28
Veterinary sciences	31	49	50	78	69	100	112	132	111
Clinical medicine, n.e.c.	3,890	3,658	3,998	4,096	4,285	4,591	4,758	4,919	5,507
Health related, n.e.c.	113	92	101	100	100	101	92	105	141

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table C-22. Nonfaculty scientists and engineers in doctorate-granting institutions by field: 1981-89

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	3,555	4,026	4,873	4,999	5,104	4,850	4,583	4,851	4,929
Total, science/engineering fields	2,958	3,485	3,973	4,019	4,148	3,888	3,682	3,896	4,043
Engineering, total	500	670	630	586	612	519	438	565	580
Aerospace	8	26	24	22	21	34	28	21	14
Agricultural	3	3	4	10	4	1	2	9	19
Biomedical	4	10	11	12	14	5	4	7	18
Chemical	75	96	50	60	76	75	48	76	75
Civil	30	114	86	51	31	33	38	39	37
Electrical	79	74	126	148	148	87	61	115	114
Engineering science	38	33	36	47	29	27	24	20	19
Industrial	4	27	10	9	3	2	13	7	5
Mechanical	113	149	128	84	112	83	85	107	89
Metallurgical/materials	96	89	94	100	131	128	96	124	120
Mining	0	9	3	0	0	1	1	0	6
Nuclear	21	19	29	19	26	28	24	27	38
Petroleum	0	0	4	6	5	1	2	2	1
Engineering, n.e.c.	29	21	25	18	12	14	12	11	25
Sciences, total	2,458	2,815	3,343	3,433	3,536	3,369	3,244	3,331	3,463
Physical sciences	631	804	756	853	962	924	830	941	961
Astronomy	66	71	67	66	78	58	69	81	68
Chemistry	300	346	304	377	396	411	349	415	446
Physics	265	386	383	408	485	450	409	444	446
Physical sciences, n.e.c.	0	1	2	2	3	5	3	1	1
Earth, atmospheric, and ocean sciences	143	239	305	242	184	190	197	196	250
Atmospheric sciences	32	29	47	46	42	39	44	18	10
Geosciences	66	100	134	130	87	98	114	108	142
Oceanography	33	99	111	44	38	38	37	65	81
Earth, atm. & oc. sci., n.e.c.	12	11	13	22	17	15	2	5	17
Mathematical sciences	112	82	125	125	176	54	69	88	64
Computer sciences	57	47	58	56	77	97	122	95	68
Agricultural sciences	68	75	168	133	116	145	113	112	136
Biological sciences	1,071	1,282	1,587	1,624	1,666	1,614	1,574	1,626	1,721
Anatomy	66	36	60	53	62	59	79	64	81
Biochemistry	200	218	280	276	339	285	296	311	369
Biology	243	295	308	306	285	349	319	314	242
Biometry/epidemiology	21	15	23	24	24	12	10	39	19
Biophysics	53	54	24	42	24	16	11	8	20
Botany	32	76	72	66	68	66	65	77	86
Cell biology	40	41	44	68	93	82	94	133	163
Ecology	10	5	9	14	13	17	22	21	31
Entomology/parasitology	35	47	61	63	60	47	31	37	36
Genetics	21	20	40	43	68	64	80	47	53
Microbiology	54	99	148	110	139	166	134	132	120
Nutrition	26	38	49	60	41	47	45	56	63
Pathology	42	43	75	84	97	66	88	91	103
Pharmacology	69	88	178	180	163	163	117	107	129
Physiology	119	160	157	157	130	126	135	147	172
Zoology	22	29	39	61	47	37	37	28	28
Biosciences, n.e.c.	18	18	20	17	13	12	11	14	6
Psychology	155	150	157	220	209	215	255	172	182
Social sciences	221	136	187	180	146	130	84	101	81
Agricultural economics	22	18	29	14	10	11	4	5	6
Anthropology	20	19	38	41	37	46	32	25	30
Economics (except agricultural)	73	49	42	42	32	1	1	0	0
Geography	6	3	9	7	4	6	1	1	4
History and philosophy of science	0	2	0	0	1	2	4	6	3
Linguistics	9	3	2	26	11	19	19	16	8
Political science	36	6	25	9	12	15	2	27	15
Sociology	48	22	19	26	31	27	18	17	5
Sociology/anthropology	0	0	1	0	0	0	0	0	0
Social sciences, n.e.c.	7	14	22	15	8	3	3	4	10
Total, health fields	597	541	900	980	956	962	901	955	886
Dentistry	3	2	81	58	66	12	11	5	10
Neurology	42	34	45	82	68	80	67	95	105
Nursing	2	8	7	5	26	13	8	4	3
Pharmaceutical sciences	31	24	37	34	51	26	36	46	32
Preventive medicine/community health	33	32	54	46	36	39	35	42	45
Speech pathology/audiology	15	10	23	24	8	13	17	9	20
Veterinary sciences	1	3	27	26	32	28	29	19	28
Clinical medicine, n.e.c.	465	427	617	681	634	729	673	662	623
Health related, n.e.c.	5	1	9	24	35	22	25	73	20

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table D-1. Science/engineering graduate students in master's-granting institutions by enrollment status and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	37,711	31,421	1,404	1,229	2,250	1,050	506	4,863	8,369	11,750
1976	39,234	32,143	1,441	1,189	2,076	1,064	553	5,195	8,456	12,169
1977	43,608	35,094	1,675	1,255	1,976	1,279	573	5,524	9,634	13,178
1978 1/	45,216	35,956	1,665	1,241	1,883	1,596	665	5,484	10,285	13,137
1979	47,178	37,057	1,658	1,230	1,798	2,010	775	5,449	10,980	13,157
1980	47,047	35,968	1,565	1,420	1,738	2,228	675	5,132	10,660	12,550
1981	48,402	35,967	1,589	1,307	1,885	3,288	727	4,917	10,801	11,453
1982	48,835	35,520	1,688	1,370	2,429	4,229	718	4,394	10,101	10,591
1983	50,977	37,221	1,719	1,263	2,512	5,310	752	4,446	11,028	10,191
1984 2/	51,747	37,933	1,654	1,326	2,411	5,444	735	4,208	11,041	11,114
1985 2/	51,920	37,696	1,683	1,328	2,345	6,021	700	4,048	10,818	10,753
1986 2/	52,175	37,388	1,717	1,174	2,327	6,221	654	3,847	10,895	10,553
1987 2/	52,897	37,370	1,771	1,154	2,381	6,054	665	3,753	11,334	10,258
1988	52,157	37,133	1,760	1,161	2,249	6,045	698	3,637	11,874	9,709
1989	55,958	39,824	1,840	1,171	2,477	6,326	672	3,874	12,747	10,717
	Full time									
1975	13,692	11,838	466	627	548	309	246	1,885	3,842	3,915
1976	13,998	11,935	509	484	573	299	277	2,086	3,624	4,083
1977	15,286	13,003	637	491	501	346	271	2,102	3,960	4,695
1978 1/	15,692	13,196	663	514	508	500	339	2,166	4,258	4,248
1979	16,288	13,543	691	538	516	723	423	2,231	4,578	3,843
1980	16,843	13,508	666	654	542	687	389	2,077	4,514	3,979
1981	16,750	12,883	696	495	466	973	420	2,078	4,480	3,275
1982	16,225	12,275	701	518	645	1,260	372	1,741	3,918	3,120
1983	17,659	13,434	703	552	648	1,411	416	1,878	4,551	3,275
1984 2/	18,137	14,032	705	553	706	1,479	427	1,792	4,508	3,862
1985 2/	17,862	13,808	731	568	673	1,727	376	1,666	4,435	3,632
1986 2/	17,934	13,661	695	461	671	1,921	377	1,569	4,526	3,441
1987 2/	18,569	13,923	762	446	704	1,933	372	1,553	4,868	3,285
1988	18,319	13,667	796	459	714	1,895	398	1,520	5,104	2,781
1989	19,065	14,170	768	423	681	1,938	377	1,551	5,494	2,938
	Part time									
1975	24,019	19,583	938	602	1,702	741	260	2,978	4,527	7,835
1976	25,236	20,208	932	705	1,503	765	276	3,109	4,832	8,086
1977	28,322	22,091	1,038	764	1,475	933	302	3,422	5,674	8,483
1978 1/	29,524	22,760	1,002	727	1,375	1,096	326	3,318	6,027	8,889
1979	30,890	23,514	967	692	1,282	1,287	352	3,218	6,402	9,314
1980	30,204	22,460	899	766	1,196	1,541	286	3,055	6,146	8,571
1981	31,652	23,084	893	812	1,419	2,315	307	2,839	6,321	8,178
1982	32,610	23,245	987	852	1,784	2,969	346	2,653	6,183	7,471
1983	33,318	23,787	1,016	711	1,864	3,899	336	2,568	6,477	6,916
1984 2/	33,610	23,901	949	773	1,705	3,965	308	2,416	6,533	7,252
1985 2/	34,058	23,888	952	760	1,672	4,294	324	2,382	6,383	7,121
1986 2/	34,241	23,727	1,022	713	1,656	4,300	277	2,278	6,369	7,112
1987 2/	34,328	23,447	1,009	708	1,677	4,121	293	2,200	6,466	6,973
1988	33,838	23,466	964	702	1,535	4,150	300	2,117	6,770	6,928
1989	36,893	25,654	1,072	748	1,796	4,388	295	2,323	7,253	7,779

See footnotes at end of table.

Table D-1. Science/engineering graduate students in master's-granting institutions by enrollment status and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engineering, total	Aerospace	Chemical engineering	Civil engineering	Electrical engineering	Industrial engineering	Mechanical engineering	Metallurgical & materials engineering	Other engineering	
	Total enrollment									
1975	3,176	34	100	636	512	528	434	39	893	3,116
1976	3,287	28	115	663	517	507	378	42	1,037	3,804
1977	4,100	22	124	849	868	604	524	68	1,041	4,416
1978 1/......	4,392	10	140	851	887	602	582	82	1,238	4,868
1979	4,751	5	159	857	908	600	649	100	1,473	5,370
1980	5,178	7	235	955	1,101	803	733	71	1,273	5,901
1981	6,091	7	235	1,199	1,293	838	705	78	1,736	6,344
1982	6,401	8	266	977	1,435	862	700	94	2,059	6,916
1983	6,628	32	224	885	1,668	827	822	109	2,061	7,128
1984 2/......	6,544	32	189	832	1,707	880	889	85	1,930	7,270
1985 2/......	6,729	32	165	827	1,753	994	911	120	1,927	7,493
1986 2/......	7,299	33	143	885	2,068	1,052	1,133	131	1,855	7,488
1987 2/......	7,715	35	149	1,093	2,311	1,003	1,214	122	1,788	7,812
1988	7,078	37	117	926	2,182	1,030	1,183	108	1,495	7,946
1989	7,924	67	113	940	2,948	1,240	1,279	122	1,215	8,210
	Full time									
1975	647	20	25	167	59	88	52	7	229	1,207
1976	639	12	26	138	55	89	45	7	267	1,424
1977	782	9	24	190	175	115	86	10	173	1,501
1978 1/......	856	3	32	214	178	116	84	12	217	1,640
1979	953	1	42	241	182	117	82	15	273	1,792
1980	1,159	3	71	224	270	196	111	18	266	2,176
1981	1,429	3	71	389	294	210	85	18	359	2,438
1982	1,541	3	90	330	256	241	139	25	457	2,409
1983	1,637	15	92	274	349	192	152	18	545	2,588
1984 2/......	1,565	14	90	236	396	162	187	9	471	2,540
1985 2/......	1,476	14	78	242	394	175	192	18	363	2,576
1986 2/......	1,695	16	73	278	490	171	202	30	435	2,578
1987 2/......	1,877	17	67	271	583	188	209	27	515	2,769
1988	1,958	16	58	328	641	222	240	23	430	2,694
1989	2,201	30	49	328	799	274	279	30	412	2,694
	Part time									
1975	2,529	14	75	469	453	440	382	32	664	1,907
1976	2,648	16	89	525	462	418	333	35	770	2,380
1977	3,318	13	100	659	693	489	438	58	868	2,913
1978 1/......	3,536	7	108	637	709	486	498	70	1,021	3,228
1979	3,798	4	117	616	726	483	567	85	1,200	3,578
1980	4,019	4	164	731	831	607	622	53	1,007	3,725
1981	4,662	4	164	810	999	628	620	60	1,377	3,906
1982	4,860	5	176	647	1,179	621	561	69	1,602	4,505
1983	4,991	17	132	611	1,319	635	670	91	1,516	4,540
1984 2/......	4,979	18	99	596	1,311	718	702	76	1,459	4,730
1985 2/......	5,253	18	87	585	1,359	819	719	102	1,564	4,917
1986 2/......	5,604	17	69	607	1,578	881	931	101	1,420	4,910
1987 2/......	5,838	18	82	822	1,728	815	1,005	95	1,273	5,043
1988	5,120	21	59	598	1,541	808	943	85	1,065	5,252
1989	5,723	37	64	612	2,149	966	1,000	92	803	5,516

1/ Master's-granting institutions were not surveyed in 1978; totals represent estimates based on 1977 and 1979 data.

2/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

SOURCE: National Science Foundation, SRS

Table D-2. Science/engineering graduate students in master's-granting institutions by sex and field: 1975-89

Year	Total, all surveyed fields	Sciences								
		Sciences, total	Physical sciences	Earth, atmospheric and ocean sciences	Mathematical sciences	Computer sciences	Agricultural sciences	Biological sciences	Psychology	Social sciences
	Total enrollment									
1975	37,711	31,421	1,404	1,229	2,250	1,050	506	4,863	8,369	11,750
1976	39,234	32,143	1,441	1,189	2,076	1,064	553	5,195	8,456	12,169
1977	43,608	35,094	1,675	1,255	1,976	1,279	573	5,524	9,634	13,178
1978 1/	45,216	35,956	1,665	1,241	1,883	1,596	665	5,484	10,285	13,137
1979	47,178	37,057	1,658	1,230	1,798	2,010	775	5,449	10,980	13,157
1980	47,047	35,968	1,565	1,420	1,738	2,228	675	5,132	10,660	12,550
1981	48,402	35,967	1,589	1,307	1,885	3,288	727	4,917	10,801	11,453
1982	48,835	35,520	1,688	1,370	2,429	4,229	718	4,394	10,101	10,591
1983	50,977	37,221	1,719	1,263	2,512	5,310	752	4,446	11,028	10,191
1984 2/	51,747	37,933	1,654	1,326	2,411	5,444	735	4,208	11,041	11,114
1985 2/	51,920	37,696	1,683	1,328	2,345	6,021	700	4,048	10,818	10,753
1986 2/	52,175	37,388	1,717	1,174	2,327	6,221	654	3,847	10,895	10,553
1987 2/	52,897	37,370	1,771	1,154	2,381	6,054	665	3,753	11,334	10,258
1988	52,157	37,133	1,760	1,161	2,249	6,045	698	3,637	11,874	9,709
1989	55,958	39,824	1,840	1,171	2,477	6,326	672	3,874	12,747	10,717
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	25,081	20,780	1,109	916	1,315	879	457	3,387	4,379	8,338
1977	27,161	21,965	1,292	990	1,270	1,039	489	3,475	4,612	8,798
1978 1/	27,396	21,963	1,243	975	1,176	1,272	578	3,408	4,877	8,434
1979	27,761	22,087	1,195	962	1,088	1,574	683	3,345	5,160	8,080
1980	27,272	20,983	1,180	1,061	1,110	1,611	585	3,019	4,698	7,719
1981	26,523	19,664	1,129	963	1,131	2,318	594	2,719	4,184	6,626
1982	26,844	19,498	1,187	1,015	1,451	2,918	588	2,302	3,752	6,285
1983	27,234	19,811	1,220	922	1,529	3,643	564	2,290	3,688	5,955
1984 2/	27,125	19,904	1,168	954	1,462	3,840	545	2,104	3,568	6,263
1985 2/	27,375	20,089	1,165	970	1,404	4,453	513	2,002	3,485	6,097
1986 2/	27,403	19,548	1,196	839	1,429	4,405	476	1,863	3,454	5,886
1987 2/	27,777	19,654	1,246	830	1,511	4,366	464	1,875	3,688	5,674
1988	26,401	18,898	1,219	774	1,385	4,318	470	1,765	3,594	5,373
1989	28,648	20,181	1,321	786	1,542	4,569	455	1,875	3,744	5,889
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	14,153	11,363	332	273	761	185	96	1,808	4,077	3,831
1977	16,447	13,129	383	265	706	240	84	2,049	5,022	4,380
1978 1/	17,820	13,993	422	266	707	324	87	2,076	5,408	4,703
1979	19,417	14,970	463	268	710	436	92	2,104	5,820	5,077
1980	19,775	14,985	385	359	628	617	90	2,113	5,962	4,831
1981	21,879	16,303	460	344	754	970	133	2,198	6,617	4,827
1982	21,991	16,022	501	355	978	1,311	130	2,092	6,349	4,306
1983	23,743	17,410	499	341	983	1,667	188	2,156	7,340	4,236
1984 2/	24,622	18,029	486	372	949	1,604	190	2,104	7,473	4,851
1985 2/	24,545	17,607	518	358	941	1,568	187	2,046	7,333	4,656
1986 2/	24,772	17,840	521	335	898	1,816	178	1,984	7,441	4,667
1987 2/	25,120	17,716	525	324	870	1,688	201	1,878	7,646	4,584
1988	25,756	18,235	541	387	864	1,727	228	1,872	8,280	4,336
1989	27,310	19,643	519	385	935	1,757	217	1,999	9,003	4,828

See footnotes at end of table.

Table D-2. Science/engineering graduate students in master's-granting institutions by sex and field: 1975-89 -Continued

Year	Engineering									Health fields
	Engi-neering, total	Aerospace	Chemical engi-neering	Civil engi-neering	Electrical engi-neering	Industrial engi-neering	Mechanical engi-neering	Metallur-gical & materials engi-neering	Other engi-neering	
	Total enrollment									
1975	3,176	34	100	636	512	528	434	39	893	3,114
1976	3,287	28	115	663	517	507	378	42	1,037	3,804
1977	4,100	22	124	849	868	604	524	68	1,041	4,414
1978 1/......	4,392	10	140	851	887	602	582	82	1,238	4,868
1979	4,751	5	159	857	908	600	649	100	1,473	5,370
1980	5,178	7	235	955	1,101	803	733	71	1,273	5,901
1981	6,091	7	235	1,199	1,293	838	705	78	1,736	6,344
1982	6,401	8	266	977	1,435	862	700	94	2,059	6,914
1983	6,628	32	224	885	1,668	827	822	109	2,061	7,128
1984 2/......	6,544	32	189	832	1,707	880	889	85	1,930	7,270
1985 2/......	6,729	32	165	827	1,753	994	911	120	1,927	7,495
1986 2/......	7,299	33	142	885	2,068	1,052	1,133	131	1,855	7,488
1987 2/......	7,715	35	149	1,093	2,311	1,003	1,214	122	1,788	7,812
1988	7,078	37	117	926	2,182	1,030	1,183	108	1,495	7,946
1989	7,924	67	113	940	2,948	1,240	1,279	122	1,215	8,210
	Men									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	3,062	28	100	585	507	486	369	39	948	1,239
1977	3,849	22	117	757	844	552	508	58	991	1,347
1978 1/......	4,046	10	128	737	860	538	560	70	1,143	1,387
1979	4,244	5	136	714	875	517	615	85	1,297	1,430
1980	4,790	7	213	837	1,065	708	703	65	1,192	1,499
1981	5,492	7	204	1,087	1,216	722	673	64	1,519	1,367
1982	5,748	8	232	883	1,342	736	663	82	1,802	1,598
1983	5,921	31	189	784	1,520	721	781	96	1,799	1,502
1984 2/......	5,763	31	161	726	1,529	708	837	75	1,696	1,458
1985 2/......	5,830	31	134	701	1,577	761	842	92	1,692	1,456
1986 2/......	6,329	32	121	759	1,844	814	1,045	104	1,610	1,526
1987 2/......	6,672	32	123	919	2,043	827	1,093	102	1,533	1,451
1988	6,116	34	94	748	1,932	843	1,064	89	1,312	1,387
1989	6,908	63	93	765	2,600	1,062	1,158	96	1,071	1,559
	Women									
1975	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1976	225	0	15	78	10	21	9	3	89	2,565
1977	251	0	7	92	24	52	16	10	50	3,067
1978 1/......	346	0	12	114	27	64	22	12	95	3,481
1979	507	0	23	143	33	83	34	15	176	3,940
1980	388	0	22	118	36	95	30	6	81	4,402
1981	599	0	31	112	77	116	32	14	217	4,977
1982	653	0	34	94	93	126	37	12	257	5,316
1983	707	1	35	101	148	106	41	13	262	5,626
1984 2/......	781	1	28	106	178	172	52	10	234	5,812
1985 2/......	899	1	31	126	176	233	69	28	235	6,039
1986 2/......	970	1	21	126	224	238	88	27	245	5,962
1987 2/......	1,043	3	26	174	268	176	121	20	255	6,361
1988	962	3	23	178	250	187	119	19	183	6,559
1989	1,016	4	20	175	348	178	121	26	144	6,651

1/ Master's-granting institutions were not surveyed and distribution by sex data were not requested in 1978; totals represent estimates based on 1977 and 1979 data.

2/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

NOTE: NA = not availible. See Technical Notes for a description of changes in survey coverage.

SOURCE: National Science Foundation, SRS

Table D-3. Science/engineering graduate students in master's-granting institutions by field: 1981-89 1/

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	48,402	48,835	50,977	51,747	51,920	52,175	52,897	52,157	55,958
Total, science/engineering fields	42,058	41,921	43,849	44,477	44,425	44,687	45,085	44,211	47,748
Engineering, total	6,091	6,401	6,628	6,544	6,729	7,299	7,715	7,078	7,924
Aerospace	7	8	32	32	32	33	35	37	67
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	45	52	59	57	56	68	76	79	66
Chemical	232	260	211	177	135	121	121	86	99
Civil	1,199	977	885	832	827	885	1,093	926	940
Electrical	1,293	1,435	1,668	1,707	1,753	2,068	2,311	2,182	2,948
Engineering science	212	290	280	253	260	234	232	219	19
Industrial	838	862	827	880	994	1,052	1,003	1,030	1,240
Mechanical	705	700	822	889	911	1,133	1,214	1,183	1,279
Metallurgical/materials	78	94	109	85	120	131	122	108	122
Mining	18	25	26	25	26	25	29	39	30
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	3	6	13	12	30	21	28	31	14
Engineering, n.e.c.	1,461	1,692	1,696	1,595	1,585	1,528	1,451	1,158	1,100
Sciences, total	35,967	35,520	37,221	37,933	37,696	37,388	37,370	37,133	39,824
Physical sciences	1,589	1,688	1,719	1,654	1,683	1,717	1,771	1,760	1,840
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	1,093	1,222	1,253	1,157	1,157	1,143	1,157	1,096	1,123
Physics	283	291	299	350	380	429	480	525	544
Physical sciences, n.e.c.	213	175	167	147	146	145	134	139	173
Earth, atmospheric, and ocean sciences	1,307	1,370	1,263	1,326	1,328	1,174	1,154	1,161	1,171
Atmospheric sciences	9	12	12	12	13	5	4	11	12
Geosciences	519	573	633	654	761	643	613	591	506
Oceanography	149	157	156	173	97	101	105	107	137
Earth, atm. & oc. sci., n.e.c.	630	628	462	487	457	425	432	452	516
Mathematical sciences	1,885	2,429	2,512	2,411	2,345	2,327	2,381	2,249	2,477
Computer sciences	3,288	4,229	5,310	5,444	6,021	6,221	6,054	6,045	6,326
Agricultural sciences	727	718	752	735	700	654	665	698	672
Biological sciences	4,917	4,394	4,446	4,208	4,048	3,847	3,753	3,637	3,874
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	39	34	40	30	34	33	45	32	39
Biology	3,994	3,509	3,520	3,369	3,181	2,939	2,884	2,810	2,887
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	41	42	45	33	28	48	45	44	38
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	53	33	45	54	50	56	64	65	72
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	50	50	49	47	45	43	41	42	44
Microbiology	181	138	125	97	105	94	95	66	64
Nutrition	212	235	258	254	309	334	312	317	360
Pathology	40	47	43	44	47	65	56	57	81
Pharmacology	11	11	6	5	2	2	1	1	2
Physiology	0	0	0	0	0	0	0	0	0
Zoology	41	32	40	37	32	18	16	12	14
Biosciences, n.e.c.	255	263	275	238	215	215	194	191	273
Psychology	10,801	10,101	11,028	11,041	10,818	10,895	11,334	11,874	12,747
Social sciences	11,453	10,591	10,191	11,114	10,753	10,553	10,258	9,709	10,717
Agricultural economics	27	44	58	67	68	64	51	50	49
Anthropology	313	260	245	219	223	213	227	235	212
Economics (except agricultural)	937	1,083	1,147	1,087	1,111	946	896	833	860
Geography	443	448	420	431	394	464	521	570	662
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	129	129	209	240	251	290	362	374	436
Political science	6,719	6,052	5,573	5,581	5,577	5,442	5,170	5,453	6,007
Sociology	766	576	544	618	565	603	615	606	694
Sociology/anthropology	89	91	186	115	128	117	100	79	76
Social sciences, n.e.c.	2,030	1,908	1,809	2,756	2,436	2,414	2,316	1,509	1,721
Total, health fields	6,344	6,914	7,128	7,270	7,495	7,488	7,812	7,946	8,210
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	14	14	14	14	13	10	22	14	9
Nursing	1,571	1,893	1,959	2,074	2,230	2,230	2,446	2,695	2,900
Pharmaceutical sciences	11	11	16	19	20	10	5	4	8
Preventive medicine/community health	96	140	187	184	186	187	201	142	139
Speech pathology/audiology	2,012	1,908	2,041	1,973	2,002	1,927	1,960	1,880	2,051
Veterinary sciences	23	25	26	26	27	23	20	17	19
Clinical medicine, n.e.c.	394	426	343	263	229	250	238	226	201
Health related, n.e.c.	2,223	2,497	2,542	2,717	2,788	2,851	2,920	2,968	2,883

1/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table D-4. Male science/engineering graduate students in master's-granting institutions by field: 1981-89 1/

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	26,523	26,844	27,234	27,125	27,375	27,403	27,777	26,401	28,648
Total, science/engineering fields	25,156	25,246	25,732	25,667	25,919	25,877	26,326	25,014	27,089
Engineering, total	5,492	5,748	5,921	5,763	5,830	6,329	6,672	6,116	6,908
Aerospace	7	8	31	31	31	32	32	34	63
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	38	43	42	41	48	59	59	[illegible]	60
Chemical	201	226	176	149	109	102	100	[illegible]	79
Civil	1,087	883	784	726	701	759	919	748	765
Electrical	1,216	1,342	1,520	1,529	1,577	1,844	2,043	1,932	2,600
Engineering science	198	246	231	212	216	190	192	189	13
Industrial	722	736	721	708	761	814	827	843	1,062
Mechanical	673	663	781	837	842	1,045	1,093	1,064	1,158
Metallurgical/materials	64	82	96	75	92	104	102	89	96
Mining	16	23	21	21	23	23	28	31	20
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	3	6	13	12	25	19	23	27	14
Engineering, n.e.c.	1,267	1,490	1,505	1,422	1,405	1,338	1,254	1,030	978
Sciences, total	19,664	19,498	19,811	19,904	20,089	19,548	19,654	18,898	20,181
Physical sciences	1,129	1,187	1,220	1,168	1,165	1,196	1,246	1,219	1,321
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	743	831	848	776	753	744	728	680	737
Physics	246	251	253	288	312	352	420	450	461
Physical sciences, n.e.c.	140	105	119	104	100	100	98	89	123
Earth, atmospheric, and ocean sciences	963	1,015	922	954	970	839	830	774	786
Atmospheric sciences	9	10	10	10	11	5	4	11	9
Geosciences	394	452	499	505	597	503	470	412	370
Oceanography	115	99	107	114	62	65	67	65	81
Earth, atm. & oc. sci., n.e.c.	445	454	306	325	300	266	289	286	326
Mathematical sciences	1,131	1,451	1,529	1,462	1,404	1,429	1,511	1,385	1,542
Computer sciences	2,318	2,918	3,643	3,840	4,453	4,405	4,366	4,318	4,569
Agricultural sciences	594	588	564	545	513	476	464	470	455
Biological sciences	2,719	2,302	2,290	2,104	2,002	1,863	1,875	1,765	1,875
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	10	23	21	10	14	14	23	9	24
Biology	2,335	1,913	1,943	1,812	1,721	1,567	1,574	1,523	1,540
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	25	26	29	26	19	36	33	31	20
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	21	21	23	27	23	28	33	25	29
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	3	4	3	2	2	2	2	1	2
Microbiology	82	68	50	35	40	37	41	24	29
Nutrition	44	37	28	41	45	42	42	33	63
Pathology	22	40	28	26	24	33	32	30	44
Pharmacology	4	4	3	3	0	0	1	1	2
Physiology	0	0	0	0	0	0	0	0	0
Zoology	25	21	21	19	17	11	8	6	6
Biosciences, n.e.c.	148	145	141	103	97	93	86	82	116
Psychology	4,184	3,752	3,688	3,568	3,485	3,454	3,688	3,594	3,744
Social sciences	6,626	6,285	5,955	6,263	6,097	5,886	5,674	5,373	5,889
Agricultural economics	22	38	47	56	58	58	44	44	42
Anthropology	134	118	101	81	118	102	87	82	100
Economics (except agricultural)	660	755	789	775	802	668	618	582	572
Geography	303	305	287	274	271	301	328	367	420
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	30	24	52	63	46	58	72	85	88
Political science	3,991	3,632	3,351	3,345	3,290	3,158	3,004	3,042	3,368
Sociology	299	231	209	264	249	256	247	274	311
Sociology/anthropology	45	51	81	51	53	46	43	39	39
Social sciences, n.e.c.	1,142	1,131	1,038	1,354	1,210	1,239	1,231	858	949
Total, health fields	1,367	1,598	1,502	1,458	1,456	1,526	1,451	1,387	1,559
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	6	6	14	14	7	5	13	7	5
Nursing	75	92	133	143	155	209	170	221	323
Pharmaceutical sciences	7	7	9	11	12	4	2	2	4
Preventive medicine/community health	16	23	56	56	40	40	45	40	34
Speech pathology/audiology	182	170	131	167	140	145	115	139	185
Veterinary sciences	15	16	12	20	22	20	17	13	15
Clinical medicine, n.e.c.	120	139	100	56	49	61	53	47	35
Health related, n.e.c.	946	1,145	1,047	991	1,031	1,042	1,036	918	958

1/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table D-5. Female science/engineering graduate students in master's-granting institutions by field: 1981-89 1/

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	21,879	21,991	23,743	24,622	24,545	24,772	25,120	25,756	27,310
Total, science/engineering fields	16,902	16,675	18,117	18,810	18,506	18,810	18,759	19,197	20,659
Engineering, total	599	653	707	781	899	970	1,043	962	1,016
Aerospace	0	0	1	1	1	1	3	3	4
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	7	9	17	16	8	9	17	17	6
Chemical	31	34	35	28	26	19	21	19	20
Civil	112	94	101	106	126	126	174	178	175
Electrical	77	93	148	178	176	224	268	250	348
Engineering science	14	44	49	41	44	44	40	30	6
Industrial	116	126	106	172	233	238	176	187	178
Mechanical	32	37	41	52	69	88	121	119	121
Metallurgical/materials	14	12	13	10	28	27	20	19	26
Mining	2	2	5	4	3	2	1	8	10
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	0	0	0	0	5	2	5	4	0
Engineering, n.e.c.	194	202	191	173	180	190	197	128	122
Sciences, total	16,303	16,022	17,410	18,029	17,607	17,840	17,716	18,235	19,643
Physical sciences	460	501	499	486	518	521	525	541	519
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	350	391	405	381	404	399	429	416	386
Physics	37	40	46	62	68	77	60	75	83
Physical sciences, n.e.c.	73	70	48	43	46	45	36	50	50
Earth, atmospheric, and ocean sciences	344	355	341	372	358	335	324	387	385
Atmospheric sciences	0	2	2	2	2	0	0	0	3
Geosciences	125	121	134	149	164	140	143	179	136
Oceanography	34	58	49	59	35	36	38	42	56
Earth, atm. & oc. sci., n.e.c.	185	174	156	162	157	159	143	166	190
Mathematical sciences	754	978	983	949	941	898	870	864	935
Computer sciences	970	1,311	1,667	1,604	1,568	1,816	1,688	1,727	1,757
Agricultural sciences	133	130	188	190	187	178	201	228	217
Biological sciences	2,198	2,092	2,156	2,104	2,046	1,984	1,878	1,872	1,999
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	29	11	19	20	20	19	22	23	15
Biology	1,659	1,596	1,577	1,557	1,460	1,372	1,310	1,287	1,347
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	16	16	16	7	9	12	12	13	18
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	32	12	22	27	27	28	31	40	43
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	47	46	46	45	43	41	39	41	42
Microbiology	99	70	75	62	65	57	54	42	35
Nutrition	168	198	230	213	264	292	270	284	297
Pathology	18	7	15	18	23	32	24	27	37
Pharmacology	7	7	3	2	2	2	0	0	0
Physiology	0	0	0	0	0	0	0	0	0
Zoology	16	11	19	18	15	7	8	6	8
Biosciences, n.e.c.	107	118	134	135	118	122	108	109	157
Psychology	6,617	6,349	7,340	7,473	7,333	7,441	7,646	8,280	9,003
Social sciences	4,827	4,306	4,236	4,851	4,656	4,667	4,584	4,336	4,828
Agricultural economics	5	6	11	11	10	6	7	6	7
Anthropology	179	142	144	138	105	111	140	153	112
Economics (except agricultural)	277	328	358	312	309	278	278	251	288
Geography	140	143	133	157	123	163	193	203	242
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	99	105	157	177	205	232	290	289	348
Political science	2,728	2,420	2,222	2,236	2,287	2,284	2,166	2,411	2,639
Sociology	467	345	335	354	316	347	368	332	383
Sociology/anthropology	44	40	105	64	75	71	57	40	37
Social sciences, n.e.c.	888	777	771	1,402	1,226	1,175	1,085	651	772
Total, health fields	4,977	5,316	5,626	5,812	6,039	5,962	6,361	6,559	6,651
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	8	8	0	0	6	5	9	7	4
Nursing	1,496	1,801	1,826	1,931	2,075	2,021	2,276	2,474	2,577
Pharmaceutical sciences	4	4	7	8	8	6	3	2	4
Preventive medicine/community health	80	117	131	128	146	147	156	102	105
Speech pathology/audiology	1,830	1,738	1,910	1,806	1,862	1,782	1,845	1,741	1,866
Veterinary sciences	8	9	14	6	5	3	3	4	4
Clinical medicine, n.e.c.	274	287	243	207	180	189	185	179	166
Health related, n.e.c.	1,277	1,352	1,495	1,726	1,757	1,809	1,884	2,050	1,925

1/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table D-6. Science/engineering graduate students in public master's-granting institutions by field: 1981-89 1/

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	33,969	33,752	34,972	35,489	35,655	36,537	37,464	36,785	39,914
Total, science/engineering fields	29,594	29,129	30,263	30,653	30,724	31,589	32,345	31,698	34,476
Engineering, total	3,660	3,870	3,851	3,781	3,843	4,357	4,686	4,066	4,540
Aerospace	0	0	0	1	2	3	4	6	27
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	35	34	40	35	31	41	52	69	49
Chemical	120	147	114	90	58	54	64	40	54
Civil	921	737	648	612	593	645	855	679	664
Electrical	670	759	733	739	769	1,049	1,271	1,105	1,474
Engineering science	6	12	4	8	10	9	6	7	12
Industrial	385	429	508	565	650	703	629	656	728
Mechanical	301	316	329	353	356	523	554	501	574
Metallurgical/materials	28	35	46	35	54	71	54	45	64
Mining	18	25	26	25	26	25	29	39	30
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	3	6	13	12	30	21	28	31	14
Engineering, n.e.c.	1,173	1,370	1,390	1,306	1,264	1,213	1,140	888	850
Sciences, total	25,934	25,259	26,412	26,872	26,881	27,232	27,659	27,632	29,936
Physical sciences	1,238	1,313	1,361	1,348	1,362	1,405	1,447	1,440	1,542
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	790	896	950	908	893	896	904	848	886
Physics	236	242	244	293	323	364	409	453	483
Physical sciences, n.e.c.	212	175	167	147	146	145	134	139	173
Earth, atmospheric, and ocean sciences	1,245	1,320	1,222	1,286	1,291	1,128	1,100	1,090	1,077
Atmospheric sciences	9	12	12	12	13	5	4	11	12
Geosciences	519	573	633	654	761	643	613	591	506
Oceanography	149	157	156	173	97	101	105	107	117
Earth, atm. & oc. sci., n.e.c.	568	578	421	447	420	379	378	381	442
Mathematical sciences	1,672	2,227	2,308	2,094	2,005	2,027	2,015	1,896	2,111
Computer sciences	1,841	2,354	2,891	2,966	3,512	3,803	3,743	3,731	3,935
Agricultural sciences	701	673	714	702	670	635	649	668	641
Biological sciences	3,990	3,453	3,608	3,457	3,332	3,165	3,121	3,016	3,177
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	0	0	0	0	0	0	14	9	13
Biology	3,467	2,965	3,062	2,967	2,826	2,648	2,607	2,571	2,654
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	33	32	35	27	27	48	45	43	36
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	13	8	21	30	26	32	36	32	35
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	0	0	0	0	0	0	0	0	0
Microbiology	104	78	75	47	54	43	45	28	39
Nutrition	172	169	187	193	233	248	240	218	229
Pathology	22	25	22	19	19	25	25	25	31
Pharmacology	0	0	0	0	0	0	0	0	0
Physiology	0	0	0	0	0	0	0	0	0
Zoology	22	13	26	24	22	16	14	10	13
Biosciences, n.e.c.	157	163	180	150	125	105	95	80	127
Psychology	7,269	6,379	7,140	7,158	7,044	7,124	7,460	7,795	8,519
Social sciences	7,978	7,540	7,168	7,861	7,665	7,945	8,124	7,996	8,934
Agricultural economics	27	44	58	67	68	64	51	50	49
Anthropology	309	260	244	219	223	213	227	235	212
Economics (except agricultural)	557	652	573	602	651	646	610	602	602
Geography	441	447	418	429	392	462	519	570	662
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	129	129	209	240	251	290	362	374	436
Political science	4,385	4,030	3,726	3,708	3,725	3,784	3,837	4,273	4,799
Sociology	654	549	515	592	542	577	586	576	637
Sociology/anthropology	77	56	57	47	47	42	42	40	40
Social sciences, n.e.c.	1,399	1,373	1,368	1,957	1,766	1,867	1,890	1,276	1,497
Total, health fields	4,375	4,623	4,709	4,836	4,931	4,948	5,119	5,087	5,438
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	0	0	0	0
Nursing	1,007	1,096	1,100	1,268	1,397	1,457	1,629	1,711	1,823
Pharmaceutical sciences	0	0	0	0	0	0	0	0	0
Preventive medicine/community health	96	105	125	131	142	152	175	142	139
Speech pathology/audiology	1,749	1,675	1,821	1,762	1,733	1,666	1,688	1,661	1,762
Veterinary sciences	0	0	0	0	0	0	0	0	0
Clinical medicine, n.e.c.	193	191	161	139	123	160	155	148	150
Health related, n.e.c.	1,330	1,556	1,502	1,536	1,536	1,513	1,472	1,425	1,564

1/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table D-7. Science/engineering graduate students in private master's-granting institutions by field: 1981-89 1/

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	14,433	15,083	16,005	16,258	16,265	15,638	15,433	15,372	16,044
Total, science/engineering fields	12,464	12,792	13,586	13,824	13,701	13,098	12,740	12,513	13,272
Engineering, total	2,431	2,531	2,777	2,763	2,886	2,942	3,029	3,012	3,384
Aerospace	7	8	32	31	30	30	31	31	40
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	10	18	19	22	25	27	24	10	17
Chemical	112	113	97	87	77	67	57	46	45
Civil	278	240	237	220	234	240	238	247	276
Electrical	623	676	935	968	984	1,019	1,040	1,077	1,474
Engineering science	206	278	276	245	250	225	226	212	7
Industrial	453	433	319	315	344	349	374	374	512
Mechanical	404	384	493	536	555	610	660	682	705
Metallurgical/materials	50	59	63	50	66	60	68	63	58
Mining	0	0	0	0	0	0	0	0	0
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	0	0	0	0	0	0	0	0	0
Engineering, n.e.c.	288	322	306	289	321	315	311	270	250
Sciences, total	10,033	10,261	10,809	11,061	10,815	10,156	9,711	9,501	9,888
Physical sciences	351	375	358	306	321	312	324	320	298
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	303	326	303	249	264	247	253	248	237
Physics	47	49	55	57	57	65	71	72	61
Physical sciences, n.e.c.	1	0	0	0	0	0	0	0	0
Earth, atmospheric, and ocean sciences	62	50	41	40	37	46	54	71	94
Atmospheric sciences	0	0	0	0	0	0	0	0	0
Geosciences	0	0	0	0	0	0	0	0	0
Oceanography	0	0	0	0	0	0	0	0	20
Earth, atm. & oc. sci., n.e.c.	62	50	41	40	37	46	54	71	74
Mathematical sciences	213	202	204	317	340	300	366	353	366
Computer sciences	1,447	1,875	2,419	2,478	2,509	2,418	2,311	2,314	2,391
Agricultural sciences	26	45	38	33	30	19	16	30	31
Biological sciences	927	941	838	751	716	682	632	621	697
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	39	34	40	30	34	33	31	23	26
Biology	527	544	458	402	355	291	277	239	233
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	8	10	10	6	1	0	0	1	2
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	40	25	24	24	24	24	28	33	37
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	50	50	49	47	45	43	41	42	44
Microbiology	77	60	50	50	51	51	50	38	25
Nutrition	40	66	71	61	76	86	72	99	131
Pathology	18	22	21	25	28	40	31	32	50
Pharmacology	11	11	6	5	2	2	1	1	2
Physiology	0	0	0	0	0	0	0	0	0
Zoology	19	19	14	13	10	2	2	2	1
Biosciences, n.e.c.	98	100	95	88	90	110	99	111	146
Psychology	3,532	3,722	3,888	3,883	3,774	3,771	3,874	4,079	4,228
Social sciences	3,475	3,051	3,023	3,253	3,088	2,608	2,134	1,713	1,783
Agricultural economics	0	0	0	0	0	0	0	0	0
Anthropology	4	0	1	0	0	0	0	0	0
Economics (except agricultural)	380	431	574	485	460	300	286	231	258
Geography	2	1	2	2	2	2	2	0	0
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	0	0	0	0	0	0	0	0	0
Political science	2,334	2,022	1,847	1,873	1,852	1,658	1,333	1,180	1,208
Sociology	112	27	29	26	23	26	29	30	57
Sociology/anthropology	12	35	129	68	81	75	58	39	36
Social sciences, n.e.c.	631	535	441	799	670	547	426	233	224
Total, health fields	1,969	2,291	2,419	2,434	2,564	2,540	2,693	2,859	2,772
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	14	14	14	14	13	10	22	14	9
Nursing	564	797	859	806	833	773	817	984	1,077
Pharmaceutical sciences	11	11	16	19	20	10	5	4	8
Preventive medicine/community health	0	35	62	53	44	35	26	0	0
Speech pathology/audiology	263	233	220	211	269	261	272	219	289
Veterinary sciences	23	25	26	26	27	23	20	17	19
Clinical medicine, n.e.c.	201	235	182	124	106	90	83	78	51
Health related, n.e.c.	893	941	1,040	1,181	1,252	1,338	1,448	1,543	1,319

1/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table D-8. Science/engineering graduate students in master's-granting institutions by enrollment status, citizenship, and racial/ethnic background: 1983-89 1/

Enrollment status, citizenship, and racial/ethnic background	1983	1984	1985	1986	1987	1988	1989
Total enrollment:	50,977	51,747	51,920	52,175	52,897	52,157	55,958
Total U.S. citizens	46,389	47,146	47,332	47,435	48,089	47,193	50,469
Black, non-Hispanic	3,342	3,401	3,195	3,201	3,089	3,245	3,482
American Indian/Alaskan Native	227	148	143	161	181	207	163
Asian/Pacific Islander	1,750	1,785	1,854	1,846	2,141	2,276	2,709
Hispanic	1,778	1,668	1,374	1,204	1,365	1,543	1,615
White, non-Hispanic	34,205	34,628	33,889	33,583	34,560	35,740	37,690
Other or unknown	5,087	5,516	6,877	7,440	6,753	4,182	4,810
Foreign	4,588	4,601	4,588	4,740	4,808	4,964	5,489
Full time enrollment:	17,659	18,137	17,862	17,934	18,569	18,319	19,065
Total U.S. citizens	14,913	15,268	15,065	15,022	15,527	15,241	15,862
Black, non-Hispanic	1,337	1,368	1,144	1,177	1,144	1,220	1,275
American Indian/Alaskan Native	116	74	62	61	82	84	59
Asian/Pacific Islander	566	552	568	563	658	660	851
Hispanic	633	560	440	404	436	466	494
White, non-Hispanic	10,771	11,115	10,575	10,696	11,370	11,298	11,768
Other or unknown	1,490	1,599	2,276	2,121	1,837	1,513	1,415
Foreign	2,746	2,869	2,797	2,912	3,042	3,078	3,203
Part time enrollment:	33,318	33,610	34,058	34,241	34,328	33,838	36,893
Total U.S. citizens	31,476	31,878	32,267	32,413	32,562	31,952	34,607
Black, non-Hispanic	2,005	2,033	2,051	2,024	1,945	2,025	2,207
American Indian/Alaskan Native	111	74	81	100	99	123	104
Asian/Pacific Islander	1,184	1,233	1,286	1,283	1,483	1,616	1,858
Hispanic	1,145	1,108	934	800	929	1,077	1,121
White, non-Hispanic	23,434	23,513	23,314	22,887	23.190	24,442	25,922
Other or unknown	3,597	3,917	4,601	5,319	4,916	2,669	3,395
Foreign	1,842	1,732	1,791	1,828	1,766	1,886	2,286

1/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

SOURCE: National Science Foundation, SRS

Table D-9. Full-time science/engineering graduate students in master's-granting institutions by field: 1981-89 1/

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	16,750	16,225	17,659	18,137	17,862	17,934	18,569	18,319	19,065
Total, science/engineering fields	14,312	13,816	15,071	15,597	15,284	15,356	15,800	15,625	16,371
Engineering, total	1,429	1,541	1,637	1,565	1,476	1,695	1,877	1,958	2,201
Aerospace	3	3	15	14	14	16	17	16	30
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	14	23	19	15	12	14	40	53	39
Chemical	68	84	79	78	52	52	42	29	37
Civil	389	330	274	236	242	278	271	328	328
Electrical	294	256	349	396	394	490	583	641	799
Engineering science	16	25	17	16	18	18	17	13	10
Industrial	210	241	192	162	175	171	188	222	274
Mechanical	85	139	152	187	192	202	209	240	279
Metallurgical/materials	18	25	18	9	18	30	27	23	30
Mining	17	22	24	21	20	23	29	36	26
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	3	6	13	12	26	21	25	29	12
Engineering, n.e.c.	312	387	485	419	313	380	429	328	337
Sciences, total	12,883	12,275	13,434	14,032	13,808	13,661	13,923	13,667	14,170
Physical sciences	696	701	703	705	731	695	762	796	768
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	549	532	528	508	513	460	500	506	451
Physics	119	131	134	164	184	204	226	265	279
Physical sciences, n.e.c.	28	38	41	33	34	31	36	25	38
Earth, atmospheric, and ocean sciences	495	518	552	553	568	461	446	459	423
Atmospheric sciences	6	8	7	6	5	1	2	4	7
Geosciences	185	236	295	296	353	274	255	254	198
Oceanography	33	42	65	81	42	42	48	53	54
Earth, atm. & oc. sci., n.e.c.	271	232	185	170	168	144	141	148	164
Mathematical sciences	466	645	648	706	673	671	704	714	681
Computer sciences	973	1,260	1,411	1,479	1,727	1,921	1,933	1,895	1,938
Agricultural sciences	420	372	416	427	376	377	372	398	377
Biological sciences	2,078	1,741	1,878	1,792	1,666	1,569	1,553	1,520	1,551
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	19	18	26	18	17	15	14	9	16
Biology	1,711	1,405	1,491	1,436	1,337	1,229	1,228	1,212	1,219
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	32	26	30	24	22	39	40	36	33
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	8	5	9	12	12	13	12	14	7
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	47	47	45	44	43	42	41	41	43
Microbiology	46	18	24	23	12	18	19	13	9
Nutrition	87	87	106	123	124	127	122	125	144
Pathology	3	7	5	6	7	5	15	9	15
Pharmacology	1	1	2	1	0	0	0	0	0
Physiology	0	0	0	0	0	0	0	0	0
Zoology	21	18	27	19	19	12	12	11	8
Biosciences, n.e.c.	103	109	113	86	73	69	50	50	57
Psychology	4,480	3,918	4,551	4,508	4,435	4,526	4,868	5,104	5,494
Social sciences	3,275	3,120	3,275	3,862	3,632	3,441	3,285	2,781	2,938
Agricultural economics	23	22	53	52	44	49	34	31	27
Anthropology	79	78	74	68	111	55	71	77	75
Economics (except agricultural)	298	392	356	346	361	335	320	285	290
Geography	181	152	177	178	174	166	216	233	243
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	14	12	59	55	34	51	61	82	79
Political science	1,559	1,534	1,575	1,738	1,623	1,586	1,379	1,393	1,474
Sociology	300	227	228	321	283	248	283	256	289
Sociology/anthropology	51	45	75	34	31	34	33	28	26
Social sciences, n.e.c.	770	658	678	1,070	971	917	888	396	435
Total, health fields	2,438	2,409	2,588	2,540	2,578	2,578	2,769	2,694	2,694
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	14	14	14	14	13	3	5	7	3
Nursing	391	416	478	431	509	499	574	691	669
Pharmaceutical sciences	1	1	2	2	2	0	1	1	0
Preventive medicine/community health	30	27	35	40	47	47	50	44	35
Speech pathology/audiology	956	956	956	973	1,001	1,051	1,075	1,058	1,211
Veterinary sciences	22	22	26	23	24	20	17	17	19
Clinical medicine, n.e.c.	87	94	95	60	48	63	50	46	52
Health related, n.e.c.	937	879	982	997	934	895	997	830	705

1/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table D-10. Part-time science/engineering graduate students in master's-granting institutions by field: 1981-89 1/

Field	1981	1982	1983	1984	1985	1986	1987	1988	1989
Total, all surveyed fields	31,652	32,610	33,318	33,610	34,058	34,241	34,328	33,838	36,893
Total, science/engineering fields	27,746	28,105	28,778	28,880	29,141	29,331	29,285	28,586	31,377
Engineering, total	4,662	4,860	4,991	4,979	5,253	5,604	5,838	5,120	5,723
Aerospace	4	5	17	18	18	17	18	21	37
Agricultural	0	0	0	0	0	0	0	0	0
Biomedical	31	29	40	42	44	54	36	26	27
Chemical	164	176	132	99	83	69	79	57	62
Civil	810	647	611	596	585	607	822	598	612
Electrical	999	1,179	1,319	1,311	1,359	1,578	1,728	1,541	2,149
Engineering science	196	265	263	237	242	216	215	206	9
Industrial	628	621	635	718	819	881	815	808	966
Mechanical	620	561	670	702	719	931	1,005	943	1,000
Metallurgical/materials	60	69	91	76	102	101	95	85	92
Mining	1	3	2	4	6	2	0	3	4
Nuclear	0	0	0	0	0	0	0	0	0
Petroleum	0	0	0	0	4	0	3	2	2
Engineering, n.e.c.	1,149	1,305	1,211	1,176	1,272	1,148	1,022	830	763
Sciences, total	23,084	23,245	23,787	23,901	23,888	23,727	23,447	23,466	25,654
Physical sciences	893	987	1,016	949	952	1,022	1,009	964	1,072
Astronomy	0	0	0	0	0	0	0	0	0
Chemistry	544	690	725	649	644	683	657	590	672
Physics	164	160	165	186	196	225	254	260	265
Physical sciences, n.e.c.	185	137	126	114	112	114	98	114	135
Earth, atmospheric, and ocean sciences	812	852	711	773	760	713	708	702	748
Atmospheric sciences	3	4	5	6	8	4	2	7	5
Geosciences	334	337	338	358	408	369	358	337	308
Oceanography	116	115	91	92	55	59	57	54	83
Earth, atm. & oc. sci., n.e.c.	359	396	277	317	289	281	291	304	352
Mathematical sciences	1,419	1,784	1,864	1,705	1,672	1,656	1,677	1,535	1,796
Computer sciences	2,315	2,969	3,899	3,965	4,294	4,300	4,121	4,150	4,388
Agricultural sciences	307	346	336	308	324	277	293	300	295
Biological sciences	2,839	2,653	2,568	2,416	2,382	2,278	2,200	2,117	2,323
Anatomy	0	0	0	0	0	0	0	0	0
Biochemistry	20	16	14	12	17	18	31	23	23
Biology	2,283	2,104	2,029	1,933	1,844	1,710	1,656	1,598	1,668
Biometry/epidemiology	0	0	0	0	0	0	0	0	0
Biophysics	0	0	0	0	0	0	0	0	0
Botany	9	16	15	9	6	9	5	8	5
Cell biology	0	0	0	0	0	0	0	0	0
Ecology	45	28	36	42	38	43	52	51	65
Entomology/parasitology	0	0	0	0	0	0	0	0	0
Genetics	3	3	4	3	2	1	0	1	1
Microbiology	135	120	101	74	93	76	76	53	55
Nutrition	125	148	152	131	185	207	190	192	216
Pathology	37	40	38	38	40	60	41	48	66
Pharmacology	10	10	4	4	2	2	1	1	2
Physiology	0	0	0	0	0	0	0	0	0
Zoology	20	14	13	18	13	6	4	1	6
Biosciences, n.e.c.	152	154	162	152	142	146	144	141	216
Psychology	6,321	6,183	6,477	6,533	6,383	6,369	6,466	6,770	7,253
Social sciences	8,178	7,471	6,916	7,252	7,121	7,112	6,973	6,928	7,779
Agricultural economics	4	22	5	15	24	15	17	19	22
Anthropology	234	182	171	151	112	158	156	158	137
Economics (except agricultural)	639	691	791	741	750	611	576	548	570
Geography	262	296	243	253	220	298	305	337	419
History and philosophy of science	0	0	0	0	0	0	0	0	0
Linguistics	115	117	150	185	217	239	301	292	357
Political science	5,160	4,518	3,998	3,843	3,954	3,856	3,791	4,060	4,533
Sociology	466	349	316	297	282	355	332	350	405
Sociology/anthropology	38	46	111	81	97	83	67	51	50
Social sciences, n.e.c.	1,260	1,250	1,131	1,686	1,465	1,497	1,428	1,113	1,286
Total, health fields	3,906	4,505	4,540	4,730	4,917	4,910	5,043	5,252	5,516
Dentistry	0	0	0	0	0	0	0	0	0
Neurology	0	0	0	0	0	7	17	7	6
Nursing	1,180	1,477	1,481	1,643	1,721	1,731	1,872	2,004	2,231
Pharmaceutical sciences	10	10	14	17	18	10	4	3	8
Preventive medicine/community health	66	113	152	144	139	140	151	98	104
Speech pathology/audiology	1,056	952	1,085	1,000	1,001	876	885	822	840
Veterinary sciences	1	3	0	3	3	3	3	0	0
Clinical medicine, n.e.c.	307	332	248	203	181	187	188	180	149
Health related, n.e.c.	1,286	1,618	1,560	1,720	1,854	1,956	1,923	2,138	2,178

1/ Master's-granting institutions were surveyed on a sample basis from 1984 through 1987. Data shown here are therefore subject to sampling error. See Technical Notes for further information.

NOTE: n.e.c. = not elsewhere classified.

SOURCE: National Science Foundation, SRS

Table E-1. Graduate enrollment in the science, engineering, and health fields in all institutions by geographic division, State, institution, and area: 1989

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engi-neering, total	Health fields
Total, all institutions	440,983	281,685	104,922	54,376
New England	32,778	20,027	8,824	3,927
Connecticut	7,213	4,831	1,409	973
Central Connecticut State University	45	45	0	0
Connecticut College	22	22	0	0
Quinnipiac College	160	0	0	160
Southern Connecticut State University	176	115	0	61
St. Joseph College	141	97	0	44
The Hartford Graduate Center	922	391	531	0
Trinity College	28	28	0	0
University of Bridgeport	320	168	152	0
University of Connecticut	2,348	1,409	481	458
University of Hartford	204	195	0	9
University of New Haven	785	661	124	0
Wesleyan University	115	115	0	0
Western Connecticut State University	16	16	0	0
Yale University	1,931	1,569	121	241
Maine	667	533	134	0
University of Maine at Orono	667	533	134	0
University of New England	0	0	0	0
Massachusetts	20,965	11,804	6,510	2,651
American International College	155	155	0	0
Anna Maria College	129	68	0	61
Assumption College	176	55	0	121
Boston College	614	440	0	174
Boston University	2,229	1,272	559	398
Brandeis University	392	392	0	0
Bridgewater State College	34	34	0	0
Clark University	238	238	0	0
Emerson College	74	0	0	74
Framingham State College	30	30	0	0
Harvard University	3,071	2,551	174	346
MGH Institute of Health Professions	176	6	0	170
Mass College of Pharmacy/Allied Health	39	17	0	22
Massachusetts Institute of Technology	4,032	1,944	2,086	2
Mount Holyoke College	13	13	0	0
Northeastern University	2,241	792	1,080	369
Salem State College	112	16	0	96
Smith College	6	6	0	0
Southeastern Massachusetts University	186	98	67	21
Tufts University	1,070	649	321	100
University of Lowell	1,582	709	711	162
University of Massachusetts	3,130	1,995	688	447
Western New England College	180	15	127	38
Williams College	19	19	0	0
Woods Hole Oceanographic Institution	0	0	0	0
Worcester Polytechnic Institute	984	287	697	0
Worcester State College	53	3	0	50
New Hampshire	1,131	832	242	57
Dartmouth College	352	235	117	0
Rivier College	145	145	0	0
University of New Hampshire	634	452	125	57
Rhode Island	2,138	1,528	413	197
Brown University	785	681	104	0
Providence College	0	0	0	0
Rhode Island College	75	75	0	0
University of Rhode Island	1,278	772	309	197
Vermont	664	499	116	49
Goddard College	45	45	0	0
Marlboro College	0	0	0	0
Middlebury College	1	1	0	0
University of Vermont & St Agric Colleg	618	453	116	49
Middle Atlantic	78,800	50,998	18,284	9,518
New Jersey	11,645	7,437	3,702	506
Drew University	18	18	0	0
Fairleigh Dickinson University	859	714	125	20
Kean College of New Jersey	102	102	0	0
Monmouth College(NJ)	178	81	97	0
Montclair State College	256	256	0	0
New Jersey Institute of Technology	2,647	1,049	1,598	0

Continued on next page.

Table E-1. Graduate enrollment in the science, engineering, and health fields in all institutions by geographic division, State, institution, and area: 1989 -Continued

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engi-neering, total	Health fields
New Jersey, continued				
Princeton University	1,327	968	359	0
Rutgers the State University	4,093	3,026	822	245
Seton Hall University	278	164	0	114
Stevens Institute of Technology	1,435	734	701	0
Trenton State College	59	20	0	39
Univ of Med and Dent of New Jersey	285	237	0	48
William Paterson College	108	68	0	40
New York	46,524	31,353	8,808	6,363
Adelphi University	943	434	0	509
Albany Medical Center Graduate School	100	84	0	16
Alfred University	143	25	118	0
CUNY Bernard Baruch College	479	389	0	90
CUNY Brooklyn College	665	573	0	92
CUNY City College	716	366	332	18
CUNY College of Staten Island St George	83	83	0	0
CUNY Graduate School and Univ Center	2,055	1,825	157	73
CUNY Herbert H. Lehman College	75	75	0	0
CUNY Hunter College	844	457	0	387
CUNY John Jay College of Crim Justice	432	432	0	0
CUNY Mt. Sinai Sch of Medicine	135	135	0	0
CUNY Queens College	518	475	0	43
Clarkson University	308	99	209	0
College of New Rochelle	278	114	0	164
College of St Rose	88	35	0	53
Columbia University Main Division	2,946	1,673	807	466
Columbia University Teachers College	1,884	1,331	0	553
Cooper Union	51	0	51	0
Cornell University	3,636	2,624	948	64
Fordham University	470	470	0	0
Hofstra University	599	507	0	92
Iona College	427	357	0	70
Ithaca College	15	0	0	15
Long Island University	1,260	563	60	637
Manhattan College	362	12	350	0
Marist College	248	248	0	0
New School for Social Research	1,066	1,066	0	0
New York Institute of Technology	961	881	80	0
New York Medical College	290	114	0	176
New York University	2,922	2,537	0	385
Niagara University	13	13	0	0
Pace University	1,217	982	0	235
Polytechnic University	2,050	820	1,230	0
Pratt Institute	21	0	21	0
Rensselaer Polytechnic Institute	1,795	597	1,198	0
Rochester Institute of Technology	756	514	233	9
Rockefeller University	121	121	0	0
Russell Sage College	556	266	0	290
SUNY - Albany	1,088	1,088	0	0
SUNY - Binghamton	1,199	714	406	79
SUNY - Buffalo	3,126	1,639	932	555
SUNY - Coll of Env Science and Forestry	482	393	89	0
SUNY - Health Sci Ctr at Brooklyn	100	87	0	13
SUNY - Health Sci Ctr at Syracuse	84	67	0	17
SUNY - Stony Brook	2,396	1,696	268	432
SUNY College at Brockport	447	361	0	86
SUNY College at Buffalo	84	84	0	0
SUNY College at Cortland	13	13	0	0
SUNY College at Fredonia	19	19	0	0
SUNY College at Geneseo	55	16	0	39
SUNY College at New Paltz	205	205	0	0
SUNY College at Oneonta	5	5	0	0

Continued on next page.

Table E-1. Graduate enrollment in the science, engineering, and health fields
in all institutions by geographic division,
State, institution, and area: 1989
-Continued

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engi-neering, total	Health fields
New York, continued				
SUNY College at Oswego	223	223	0	0
SUNY College at Plattsburgh	36	36	0	0
SUNY College at Potsdam	2	2	0	0
SUNY College of Technology at Utica/Rom	63	63	0	0
SUNY State College of Optometry	33	0	0	33
Sarah Lawrence College	44	44	0	0
St Bonaventure University	14	14	0	0
St John's University	569	307	0	262
Syracuse University	2,383	1,140	1,067	176
Union College(NY)	176	72	47	57
University of Rochester	1,376	1,097	205	74
Vassar College	6	6	0	0
Wagner College	102	23	0	79
Yeshiva University	666	642	0	24
Pennsylvania	20,631	12,208	5,774	2,649
Bloomsburg University of Pennsylvania	94	15	0	79
Bryn Mawr College	116	116	0	0
Bucknell University	69	33	36	0
California University of Pennsylvania	142	142	0	0
Carnegie-Mellon University	1,609	1,008	601	0
Clarion University of Pennsylvania	77	77	0	0
Drexel University	1,276	451	825	0
Duquesne University	314	192	0	122
East Stroudsburg Univ of Pennsylvania	105	105	0	0
Edinboro University of Pennsylvania	217	111	0	106
Gannon University	82	5	17	60
Hahnemann University	406	269	0	137
Indiana University of Pennsylvania	103	103	0	0
Kutztown University of Pennsylvania	194	194	0	0
Lehigh University	1,018	529	489	0
Mansfield University of Pennsylvania	11	11	0	0
Marywood College	137	137	0	0
Millersville University of Pennsylvania	96	78	18	0
Pennsylvania State University	4,348	2,443	1,762	143
Phila College of Osteopathic Medicine	15	0	0	15
Philadelphia Coll of Pharmacy and Sci	46	24	0	22
Shippensburg University of Pennsylvania	259	259	0	0
Slippery Rock University of Pennsylvani	92	0	0	92
St Joseph's University	356	161	0	195
Swarthmore College	0	0	0	0
Temple University	1,565	1,151	62	352
The Medical College of Pennsylvania	92	72	0	20
Thomas Jefferson University	137	90	0	47
University of Pennsylvania	2,521	1,868	600	53
University of Pittsburgh	3,635	1,683	788	1,164
University of Scranton	101	71	0	30
Villanova University	902	523	379	0
West Chester University of Pennsylvania	285	285	0	0
Widener University	178	0	178	0
Wilkes University	33	2	19	12
East North Central	78,219	49,400	18,376	10,443
Illinois	23,543	16,543	3,971	3,029
Bradley University	190	78	112	0
Chicago Coll of Osteo Medicine	0	0	0	0
Chicago School of Prof Psych	144	144	0	0
Chicago State University	171	171	0	0
De Paul University	1,400	1,288	0	112
Eastern Illinois University	153	134	0	19
Forest Institute of Prof Psych	260	260	0	0
Governors State University	595	337	0	258
Illinois Institute of Technology	1,510	849	661	0
Illinois State University	567	482	0	85
Loyola University of Chicago	608	480	0	128

Continued on next page.

Table E-1. Graduate enrollment in the science, engineering, and health fields in all institutions by geographic division, State, institution, and area: 1989 -Continued

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engi-neering, total	Health fields
Illinois, continued				
Northeastern Illinois University	875	818	0	57
Northern Illinois University	978	697	51	230
Northwestern University	1,931	1,085	615	231
Roosevelt University	438	438	0	0
Rush University	487	92	0	395
Sangamon State University	633	576	0	57
Southern Illinois Univ at Carbondale	1,599	1,089	225	285
Southern Illinois Univ at Edwardsville	698	420	85	193
University of Chicago	1,969	1,960	0	9
University of Health Sciences (Chicago)	117	113	0	4
University of Illinois at Chicago	3,044	1,409	867	768
University of Illinois at Urbana	4,792	3,317	1,355	120
Western Illinois University	384	306	0	78
Indiana	9,357	5,993	1,983	1,381
Ball State University	333	276	0	57
Butler University	53	35	0	18
Indiana State University	352	312	23	17
Indiana University	3,473	2,548	23	902
Indiana Wesleyan University	27	0	0	27
Purdue University	4,040	2,129	1,622	289
Rose-Hulman Institute of Technology	116	14	102	0
Saint Francis College	62	62	0	0
University of Evansville	78	10	11	57
University of Notre Dame	756	554	202	0
Valparaiso University	67	53	0	14
Michigan	15,943	9,319	4,833	1,791
Andrews University	189	59	0	130
Central Michigan University	312	265	0	47
Eastern Michigan University	919	681	207	31
Grand Valley State University	162	64	0	98
Michigan State University	3,051	2,372	502	177
Michigan Technological University	442	179	263	0
Northern Michigan University	175	130	0	45
Oakland University	701	310	329	62
University of Detroit	588	416	143	29
University of Michigan	5,083	2,307	2,272	504
Wayne State University	2,979	1,454	985	540
Western Michigan University	1,342	1,082	132	128
Ohio	19,995	11,750	5,415	2,830
Air Force Institute of Technology	548	98	450	0
Antioch University	1,019	956	63	0
Bowling Green State University	563	541	0	22
Case Western Reserve University	1,758	842	703	213
Cleveland State University	1,060	664	325	71
John Carroll University	64	64	0	0
Kent State University	961	725	0	236
Medical College of Ohio at Toledo	285	0	0	285
Miami University	454	414	14	26
NE Ohio Univ Med School	0	0	0	0
Ohio State University	5,164	3,197	1,154	813
Ohio University	986	688	241	57
Union Institute	488	438	0	50
University of Akron	1,526	834	470	222
University of Cincinnati	2,422	1,070	870	482
University of Dayton	775	187	588	0
University of Toledo	666	367	266	33
Wright State University	961	518	214	229
Xavier University	155	64	0	91
Youngstown State University	140	83	57	0
Wisconsin	9,381	5,795	2,174	1,412
Marquette University	814	230	369	215
Medical College of Wisconsin	84	84	0	0
Milwaukee School of Engineering	266	0	266	0
University of Wisconsin - Eau Claire	130	39	0	91

Continued on next page.

Table E-1. Graduate enrollment in the science, engineering, and health fields in all institutions by geographic division, State, institution, and area: 1989 -Continued

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
Wisconsin, continued				
University of Wisconsin - Green Bay	68	68	0	0
University of Wisconsin - La Crosse	56	26	0	30
University of Wisconsin - Madison	5,571	3,872	1,095	604
University of Wisconsin - Milwaukee	1,709	1,117	382	210
University of Wisconsin - Oshkosh	270	166	0	104
University of Wisconsin - Platteville	23	11	12	0
University of Wisconsin - River Falls	45	45	0	0
University of Wisconsin - Stevens Point	131	69	0	62
University of Wisconsin - Stout	168	45	50	73
University of Wisconsin - Whitewater	46	23	0	23
West North Central	28,993	19,070	6,162	3,761
Iowa	5,192	3,426	1,155	611
Drake University	145	78	0	67
Iowa State University of Sci & Tech	2,680	1,937	737	6
Loras College	30	30	0	0
Maharishi International University	68	68	0	0
Marycrest College	46	46	0	0
Univ. of Osteopathic Med & Health Sci	0	0	0	0
University of Iowa	2,140	1,216	418	506
University of Northern Iowa	83	51	0	32
Kansas	5,164	3,364	1,048	752
Emporia State University - Kansas	133	133	0	0
Fort Hays State University	68	68	0	0
Kansas State University	1,533	1,226	276	31
Pittsburg State University	328	273	55	0
University of Kansas	2,191	1,338	398	455
Washburn University of Topeka	30	30	0	0
Wichita State University	881	296	319	266
Minnesota	7,246	5,058	1,219	969
Bemidji State University	16	16	0	0
Mankato State University	312	278	0	34
Mayo Graduate School	74	57	0	17
Moorhead State University	599	475	0	124
St Mary's College of Minnesota	575	431	0	144
St. Cloud State University	63	29	0	34
University of Minnesota	5,607	3,772	1,219	616
Missouri	7,150	4,203	1,975	972
Central Missouri State University	226	139	40	47
Kirksville College of Osteopathic Med	0	0	0	0
Lincoln University	128	128	0	0
Northeast Missouri State University	27	10	0	17
Northwest Missouri State University	86	86	0	0
Southeast Missouri State University	37	37	0	0
Southwest Missouri State University	110	77	0	33
St. Louis University	804	392	0	412
University of Health Sciences (Kansas C	0	0	0	0
University of Missouri - Columbia	1,843	1,206	493	144
University of Missouri - Kansas City	908	679	0	229
University of Missouri - Rolla	1,231	310	921	0
University of Missouri - St Louis	313	313	0	0
Washington University	1,437	826	521	90
Nebraska	2,380	1,780	331	269
Creighton University	136	82	0	54
Kearney State College	51	51	0	0
University of Nebraska - Lincoln	1,457	1,102	331	24
University of Nebraska - Omaha	473	473	0	0

Continued on next page.

Table E-1. Graduate enrollment in the science, engineering, and health fields in all institutions by geographic division, State, institution, and area: 1989 -Continued

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engi-neering, total	Health fields
Nebraska, continued				
University of Nebraska Medical Center	263	72	0	191
North Dakota	950	756	153	41
North Dakota State University	618	493	118	7
University of North Dakota	332	263	35	34
South Dakota	911	483	281	147
South Dakota School of Mines and Tech	274	86	188	0
South Dakota State University	437	230	93	114
University of South Dakota	200	167	0	33
South Atlantic	65,417	42,058	15,489	7,870
Delaware	1,236	874	302	60
Delaware State University	18	18	0	0
University of Delaware	1,218	856	302	60
District of Columbia	8,273	5,732	1,908	633
Catholic University of America	916	464	245	207
Gallaudet University	35	0	0	35
George Washington University	4,242	2,404	1,558	280
Georgetown University	886	793	0	93
Howard University	656	551	105	0
The American University	1,476	1,476	0	0
University of the District of Columbia	62	44	0	18
Florida	12,838	8,316	3,107	1,415
Florida A & M University	140	89	28	23
Florida Atlantic University	490	316	174	0
Florida Institute of Technology	1,024	707	317	0
Florida International University	718	412	197	109
Florida State University	1,425	1,252	72	101
Jacksonville University	20	20	0	0
Nova University	1,324	1,250	0	74
University of Central Florida	1,047	479	435	133
University of Florida	3,371	1,933	1,005	433
University of Miami	1,157	752	262	143
University of South Florida	1,817	801	617	399
University of West Florida	305	305	0	0
Georgia	7,599	4,568	2,228	803
Augusta College	25	25	0	0
Clark Atlanta University	312	312	0	0
Emory University	852	466	0	386
Fort Valley State University	66	66	0	0
Georgia College	217	176	0	41
Georgia Institute of Technology	2,766	704	2,062	0
Georgia Southern College	59	59	0	0
Georgia State University	1,068	930	0	138
Institute of Paper Science & Technology	45	0	45	0
Medical College of Georgia	214	67	0	147
Mercer University	144	29	112	3
Morehouse School of Medicine	0	0	0	0
University of Georgia	1,501	1,438	9	54
Valdosta State College	231	197	0	34
West Georgia College	99	99	0	0
Maryland	9,620	6,267	1,886	1,467
Coppin State College	28	28	0	0
Frostburg State University	46	46	0	0
Hood College	524	524	0	0
Johns Hopkins University	1,694	973	174	547
Loyola College	761	445	276	40
Morgan State University	65	65	0	0
Towson State University	415	252	0	163
Uniformed Serv Univ of the Hlth Science	126	92	0	34
University of Baltimore	214	214	0	0
University of Maryland - Balt Prof Sch	921	317	0	604
University of Maryland - Baltimore Cnty	835	679	143	13
University of Maryland - College Park	3,860	2,501	1,293	66
University of Maryland Eastern Shore	62	62	0	0
Washington College	69	69	0	0
North Carolina	9,597	6,501	1,790	1,306
Appalachian State University	217	217	0	0
Duke University	1,299	973	256	70
East Carolina University	382	276	0	106
North Carolina A & T State University	280	89	191	0

Continued on next page.

Table E-1. Graduate enrollment in the science, engineering, and health fields in all institutions by geographic division, State, institution, and area: 1989 -Continued

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engi-neering, total	Health fields
North Carolina, continued				
North Carolina Central University	62	62	0	0
North Carolina State Univ at Raleigh	3,114	1,835	1,215	64
Univ of North Carolina at Chapel Hill	2,963	2,091	44	828
Univ of North Carolina at Charlotte	452	295	84	73
Univ of North Carolina at Greensboro	447	282	0	165
University of North Carolina/Wilmington	58	58	0	0
Wake Forest University	206	206	0	0
Western Carolina University	117	117	0	0
South Carolina	3,607	2,137	1,013	457
Clemson University	1,458	768	641	49
College of Charleston	74	74	0	0
Furman University	5	5	0	0
Medical University of South Carolina	108	105	0	3
University of South Carolina	1,892	1,115	372	405
Winthrop College	70	70	0	0
Virginia	10,629	6,501	2,826	1,302
College of William and Mary	302	302	0	0
Eastern Virginia Medical School	70	70	0	0
George Mason University	2,050	1,600	273	177
Hampton University	124	59	0	65
Hollins College	8	8	0	0
Institute of Textile Technology	30	0	30	0
James Madison University	148	101	0	47
Old Dominion University	1,184	671	337	176
Radford University	228	163	0	65
University of Richmond	23	23	0	0
University of Virginia	1,666	1,095	488	83
Virginia Commonwealth University	1,507	832	23	652
Virginia Polytechnic Inst and State Uni	3,242	1,530	1,675	37
Virginia State University	47	47	0	0
West Virginia	2,018	1,162	429	427
Marshall University	216	163	0	53
Univ of West Virginia Coll of Grad Stds	377	286	91	0
University of Charleston	11	11	0	0
West Virginia Institute of Technology	18	0	18	0
West Virginia Sch of Osteopathic Med	0	0	0	0
West Virginia University	1,396	702	320	374
East South Central	18,864	12,107	4,248	2,509
Alabama	5,747	3,175	1,428	1,144
Alabama A & M University	206	206	0	0
Alabama State University	20	20	0	0
Auburn University	1,496	946	469	81
Jacksonville State University	108	108	0	0
The University of Alabama	768	519	234	15
The University of Alabama at Birmingham	1,438	493	153	792
The University of Alabama in Huntsville	940	416	483	41
Troy State University at Montgomery	182	182	0	0
Tuskegee University	110	53	38	19
University of Montevallo	26	0	0	26
University of South Alabama	453	232	51	170
Kentucky	4,142	2,727	928	487
Eastern Kentucky University	314	224	90	0
Morehead State University	54	54	0	0
Murray State University	341	186	56	99
Spalding University	151	119	0	32
University of Kentucky	1,878	1,311	315	252
University of Louisville	1,186	615	467	104
Western Kentucky University	218	218	0	0
Mississippi	2,751	2,089	354	308
Jackson State University	211	211	0	0
Mississippi State University	1,090	811	268	11
Mississippi University for Women	33	0	0	33
University of Mississippi	756	549	86	121
University of Southern Mississippi	661	518	0	143
Tennessee	6,224	4,116	1,538	570
Austin Peay State University	45	45	0	0
East Tennessee State University	318	244	0	74
Fisk University	21	21	0	0

Continued on next page.

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Table E-1. Graduate enrollment in the science, engineering, and health fields in all institutions by geographic division, State, institution, and area: 1989 -Continued

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
Tennessee, continued				
Meharry Medical College	35	35	0	0
Memphis State University	767	554	157	56
Middle Tennessee State University	338	338	0	0
Tennessee State University	217	165	52	0
Tennessee Technological University	285	132	153	0
University of Tennessee at Chattanooga	252	198	54	0
University of Tennessee at Knoxville	2,738	1,559	881	298
University of Tennessee, Memphis	207	106	0	101
Vanderbilt University	1,001	719	241	41
West South Central	39,983	24,524	9,379	6,080
Arkansas	1,799	1,134	336	329
Arkansas State University	303	230	0	73
University of Arkansas	940	604	336	0
University of Arkansas - Med Sci Campus	172	52	0	120
University of Arkansas at Little Rock	151	100	0	51
University of Central Arkansas	233	148	0	85
Louisiana	4,877	3,106	944	827
Grambling State University	15	15	0	0
Louisiana State University System	2,340	1,665	564	111
Louisiana Tech University	263	49	199	15
Loyola University in New Orleans	1	1	0	0
McNeese State University	126	91	35	0
Nicholls State University	54	54	0	0
Northeast Louisiana University	188	141	0	47
Northwestern State Univ of Louisiana	166	46	0	120
Southeastern Louisiana University	29	29	0	0
Southern University A & M College	138	138	0	0
Tulane University of Louisiana	947	487	46	414
University of Southwestern Louisiana	534	390	100	44
Xavier University	76	0	0	76
Oklahoma	4,330	2,255	1,379	696
East Central University	10	10	0	0
Oklahoma State University	1,690	1,134	551	5
Oral Roberts University	33	13	0	20
Southwestern Oklahoma State University	70	70	0	0
University of Oklahoma	2,270	873	726	671
University of Tulsa	257	155	102	0
Texas	28,977	18,029	6,720	4,228
Abilene Christian University	115	104	0	11
Angelo State University	94	94	0	0
Baylor College of Dentistry	57	0	0	57
Baylor College of Medicine	266	213	0	53
Baylor University	430	280	0	150
Corpus Christi State University	136	88	0	48
East Texas State University	377	377	0	0
Incarnate Word College	111	46	0	65
Lamar University	320	121	154	45
Midwestern State University	76	76	0	0
Pan American University	15	15	0	0
Prairie View A & M University	123	112	11	0
Rice University	789	533	256	0
Sam Houston State University	328	328	0	0
Southern Methodist University	952	471	481	0
Southwest Texas State University	613	490	0	123
St Mary's University of San Antonio	42	0	42	0
Stephen F. Austin State University	205	205	0	0
Sul Ross State University	59	59	0	0
Tarleton State University	55	55	0	0
Texas A & I University	189	120	69	0
Texas A & M University	4,635	3,143	1,454	38
Texas Christian University	143	126	0	17
Texas College of Osteopathic Medicine	0	0	0	0
Texas Southern University	207	207	0	0
Texas Tech University	1,167	880	266	21
Texas Woman's University	2,098	614	0	1,484

Continued on next page.

Table E-1. Graduate enrollment in the science, engineering, and health fields in all institutions by geographic division, State, institution, and area: 1989 -Continued

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
Texas, continued				
Trinity University	112	0	0	112
Univ of Texas Hlth Sci Ctr San Antonio	443	124	0	319
Univ of Texas Hlth Sci Ctr at Houston	832	364	0	468
Univ of Texas MD Anderson Cancer Center	0	0	0	0
Univ of Texas Med Branch at Galveston	231	102	0	129
Univ of Texas SW Medical Ctr at Dallas	318	247	18	53
Univ of Texas at Arlington	1,910	788	922	200
Univ of Texas at Austin	4,436	2,435	1,769	232
Univ of Texas at Dallas	1,169	886	156	127
Univ of Texas at El Paso	701	362	221	118
University of Central Texas	107	107	0	0
University of Houston - Victoria	29	29	0	0
University of Houston at Clear Lake Cit	1,235	1,092	77	66
University of Houston-University Park	2,088	1,160	785	143
University of North Texas	1,221	1,111	22	88
University of Texas at San Antonio	176	176	0	0
University of Texas at Tyler	181	159	0	22
University of Texas of the Permian Basi	52	50	2	0
West Texas State University	134	80	15	39
Mountain	25,617	16,910	6,206	2,501
Arizona	7,239	4,599	1,976	664
Arizona State University	2,961	1,483	1,150	328
Northern Arizona University	804	726	0	78
University of Arizona	3,474	2,390	826	258
Colorado	7,542	4,982	1,710	850
Colorado School of Mines	679	474	205	0
Colorado State University	1,864	1,255	413	196
University of Colorado	3,864	2,281	1,092	491
University of Denver	664	616	0	48
University of Northern Colorado	471	356	0	115
Idaho	1,405	923	333	149
Idaho State University	445	260	36	149
University of Idaho	960	663	297	0
Montana	1,065	834	167	64
Montana College Mineral Sci & Technolog	94	7	73	14
Montana State University	515	392	94	29
University of Montana	456	435	0	21
Nevada	1,056	778	182	96
University of Nevada at Las Vegas	294	182	70	42
University of Nevada at Reno	762	596	112	54
New Mexico	2,737	1,791	756	190
Eastern New Mexico University	110	93	0	17
New Mexico Highlands University	40	40	0	0
New Mexico Institute of Mining and Tech	217	161	56	0
New Mexico State University	856	591	250	15
University of New Mexico	1,514	906	450	158
Utah	3,771	2,378	957	436
Brigham Young University	707	508	154	45
University of Utah	1,817	1,040	444	333
Utah State University	1,247	830	359	58
Wyoming	802	625	125	52
University of Wyoming	802	625	125	52
Pacific	69,935	45,021	17,846	7,068
Alaska	580	394	157	29
University of Alaska Southeast	20	20	0	0
University of Alaska at Anchorage	116	24	63	29
University of Alaska at Fairbanks	444	350	94	0
California	57,502	36,389	15,349	5,764
Azusa Pacific University	151	103	0	48
Biola University	173	173	0	0
Calif Poly State Univ at San Luis Obisp	327	220	107	0
Calif Sch of Prof Psych - Fresno	235	235	0	0

Continued on next page.

Table E-1. Graduate enrollment in the science, engineering, and health fields in all institutions by geographic division, State, institution, and area: 1989 -Continued

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
California, continued				
Calif Sch of Prof Psych - Los Angeles	501	501	0	0
Calif Sch of Prof Psych - San Diego	480	480	0	0
Calif Sch of Prof Psych-Berkeley/Alamed	501	501	0	0
Calif State Polytechnic Univ at Pomona	519	322	197	0
Calif State Univ at Dominguez Hills	369	369	0	0
Calif State Univ at Fullerton	1,036	711	262	63
Calif State Univ at Hayward	814	757	0	57
Calif State Univ at Long Beach	2,021	1,025	747	249
Calif State Univ at Los Angeles	1,020	608	154	258
Calif State Univ at San Bernardino	242	242	0	0
Calif State Univ of Stanislaus	134	134	0	0
Calif State University at Chico	435	359	10	66
Calif State University at Fresno	598	461	12	125
Calif State University at Northridge	1,235	633	506	96
Calif State University at Sacramento	815	479	213	123
California Institute of Integral Studie	300	300	0	0
California Institute of Technology	1,065	635	430	0
California State Univ - Bakersfield	273	186	0	87
Chapman College	253	172	0	81
Charles R. Drew Univ of Medicine & Sci	0	0	0	0
Claremont Univ Center & Graduate School	502	502	0	0
Dominican College of San Rafael	99	99	0	0
Fuller Theological Seminary	295	295	0	0
Golden Gate University	618	618	0	0
Harvey Mudd College	6	0	6	0
Humboldt State University	187	173	14	0
John F Kennedy University	832	790	0	42
Loma Linda University	464	111	0	353
Loyola Marymount University	220	158	62	0
National University	100	50	50	0
Northrop University	224	95	129	0
Occidental College	2	2	0	0
Pacific Grad School of Prof Psych	347	347	0	0
Pacific States University	20	0	20	0
Pepperdine University	693	693	0	0
Rand Graduate Institute Policy Studies	60	60	0	0
San Diego State University	2,100	1,230	346	524
San Francisco State University	972	840	0	132
San Jose State University	1,965	1,010	676	279
Santa Clara University	1,591	584	1,007	0
Sonoma State University	203	149	0	54
Stanford University	4,177	1,961	2,173	43
The Fielding Institute	470	470	0	0
The Wright Institute	174	174	0	0
US International University	497	497	0	0
US Naval Postgraduate School	1,182	603	579	0
University of Calif at Berkeley	5,057	2,939	1,639	479
University of Calif at Davis	2,668	2,066	589	13
University of Calif at Irvine	1,200	861	299	40
University of Calif at Los Angeles	4,442	2,387	978	1,077
University of Calif at Riverside	672	672	0	0
University of Calif at San Diego	1,702	1,302	303	97
University of Calif at San Francisco	1,037	338	30	669
University of Calif at Santa Barbara	1,440	964	418	58
University of Calif at Santa Cruz	555	527	28	0
University of La Verne	181	181	0	0
University of Redlands	27	0	0	27
University of San Diego	179	50	0	129
University of San Francisco	141	73	68	0
University of Southern California	6,375	2,782	3,195	398

Continued on next page.

Table E-1. Graduate enrollment in the science, engineering, and health fields in all institutions by geographic division, State, institution, and area: 1989 -Ccontinued

Division, State, and institution	Total, all surveyed fields	Sciences, total	Engineering, total	Health fields
California, continued				
University of the Pacific	156	51	8	97
West Coast University	173	79	94	0
Hawaii	1,857	1,335	190	332
University of Hawaii at Manoa	1,857	1,335	190	332
Oregon	3,651	2,735	759	157
Oregon Grad Inst of Science & Technolog	148	100	48	0
Oregon Health Sciences University	88	88	0	0
Oregon State University	1,761	1,239	475	47
Pacific University	6	0	0	6
Portland State University	815	503	221	91
Southern Oregon State College	29	29	0	0
University of Oregon	776	776	0	0
University of Portland	28	0	15	13
Washington	6,345	4,168	1,391	786
Central Washington University	102	102	0	0
Eastern Washington University	220	196	0	24
Gonzaga University	15	0	15	0
Pacific Lutheran University	73	73	0	0
Saint Martin's College	23	0	23	0
Seattle University	250	131	119	0
University of Washington	4,179	2,578	995	606
Walla Walla College	2	2	0	0
Washington State University	1,191	858	239	94
Western Washington University	283	228	0	55
Whitworth College	7	0	0	7
Outlying Areas	2,377	1,570	108	699
Guam	0	0	0	0
University of Guam	0	0	0	0
Puerto Rico	2,377	1,570	108	699
Catholic University of Puerto Rico	61	0	0	61
Center for Adv Studies on PR & Caribbea	213	213	0	0
Ponce School of Medicine	22	22	0	0
University of Puerto Rico	364	256	108	0
University of Puerto Rico - Rio Piedras	1,116	998	0	118
University of Puerto Rico Med Sci Campu	601	81	0	520

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-2. Graduate science enrollment in all institutions by geographic division, State, institution, and major field of science: 1989

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathematical sciences	Computer sciences	Agricultural sciences	Biological	Psychology	Social sciences
Total, all institutions	281,685	33,584	13,812	19,473	32,914	11,039	49,662	46,248	74,953
New England	20,027	3,181	1,011	1,036	2,427	418	4,405	2,260	5,289
Connecticut	4,831	513	169	247	897	40	1,184	714	1,067
Central Connecticut State University	45	0	0	26	0	0	5	14	0
Connecticut College	22	0	0	0	0	0	3	19	0
Quinnipiac College	0	0	0	0	0	0	0	0	0
Southern Connecticut State University	115	17	0	0	0	0	61	37	0
St. Joseph College	97	19	0	0	0	0	34	44	0
The Hartford Graduate Center	391	0	0	0	391	0	0	0	0
Trinity College	28	0	0	3	0	0	0	0	25
University of Bridgeport	168	20	0	0	53	0	25	69	1
University of Connecticut	1,409	174	63	98	87	11	341	236	399
University of Hartford	195	3	0	0	0	0	13	87	92
University of New Haven	661	0	55	37	301	0	50	91	127
Wesleyan University	115	49	2	19	0	0	39	6	0
Western Connecticut State University	16	0	11	5	0	0	0	0	0
Yale University	1,569	231	38	59	65	29	613	111	423
Maine	533	55	45	10	16	94	137	58	118
University of Maine at Orono	533	55	45	10	16	94	137	58	118
University of New England	0	0	0	0	0	0	0	0	0
Massachusetts	11,804	2,195	523	590	1,126	185	2,407	077	3,701
American International College	155	0	0	0	0	0	0	104	51
Anna Maria College	68	0	0	0	0	0	14	54	0
Assumption College	55	0	0	0	0	0	0	55	0
Boston College	440	96	30	22	0	0	36	18	238
Boston University	1,272	183	20	63	66	0	350	195	395
Brandeis University	392	91	0	39	23	0	115	31	93
Bridgewater State College	34	3	0	0	0	0	5	26	0
Clark University	238	31	17	1	0	0	22	52	115
Emerson College	0	0	0	0	0	0	0	0	0
Framingham State College	30	0	0	0	0	0	30	0	0
Harvard University	2,551	361	34	76	0	0	674	82	1,324
MGH Institute of Health Professions	6	0	0	0	0	0	6	0	0
Mass College of Pharmacy/Allied Health	17	9	0	0	0	0	8	0	0
Massachusetts Institute of Technology	1,944	564	250	120	198	0	227	50	535
Mount Holyoke College	13	2	0	0	0	0	6	5	0
Northeastern University	792	156	0	66	151	0	88	37	294
Salem State College	16	0	0	16	0	0	0	0	0
Smith College	6	0	0	0	0	0	6	0	0
Southeastern Massachusetts University	98	31	0	0	15	0	20	32	0
Tufts University	649	97	0	17	15	0	312	120	88
University of Lowell	709	240	73	86	218	0	26	28	38
University of Massachusetts	1,995	307	99	72	241	185	403	188	500
Western New England College	15	0	0	0	4	0	0	0	11
Williams College	19	0	0	0	0	0	0	0	19
Woods Hole Oceanographic Institution	0	0	0	0	0	0	0	0	0
Worcester Polytechnic Institute	287	24	0	12	195	0	56	0	0
Worcester State College	3	0	0	0	0	0	3	0	0
New Hampshire	832	146	67	47	196	50	192	41	93
Dartmouth College	235	70	21	18	19	0	91	16	0
Rivier College	145	0	0	0	143	0	2	0	0
University of New Hampshire	452	76	46	29	34	50	99	25	93
Rhode Island	1,528	220	195	123	174	34	285	249	248
Brown University	681	152	47	94	95	0	95	19	179
Providence College	0	0	0	0	0	0	0	0	0
Rhode Island College	75	3	0	8	0	0	16	48	0
University of Rhode Island	772	65	148	21	79	34	174	182	69
Vermont	499	52	12	19	18	15	200	121	62
Goddard College	45	0	0	0	0	0	0	40	5
Marlboro College	0	0	0	0	0	0	0	0	0
Middlebury College	1	0	0	0	0	0	1	0	0
University of Vermont & St Agric Colleg	453	52	12	19	18	15	199	81	57
Middle Atlantic	50,998	6,025	1,708	3,223	9,167	575	8,001	7,958	14,341
New Jersey	7,437	939	332	413	2,214	70	1,381	542	1,546
Drew University	18	0	0	0	0	0	0	0	18
Fairleigh Dickinson University	714	57	0	10	224	0	69	203	151
Kean College of New Jersey	102	0	0	0	0	0	0	102	0
Monmouth College(NJ)	81	0	0	0	81	0	0	0	0
Montclair State College	256	10	43	35	51	0	23	40	54
New Jersey Institute of Technology	1,049	0	0	28	1,021	0	0	0	0

Continued on next page.

Table E-2. Graduate science enrollment in all institutions by geographic division, State, institution, and major field of science: 1989 -Continued

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathe-matical sciences	Computer sciences	Agricul-tural sciences	Bio-logical	Psychol-ogy	Social sciences
New Jersey, continued									
Princeton University	968	285	45	68	54	0	94	30	392
Rutgers the State University	3,026	377	244	204	209	70	858	167	897
Seton Hall University	164	89	0	9	0	0	66	0	0
Stevens Institute of Technology	734	121	0	39	574	0	0	0	0
Trenton State College	20	0	0	20	0	0	0	0	0
Univ of Med and Dent of New Jersey	237	0	0	0	0	0	237	0	0
William Paterson College	68	0	0	0	0	0	34	0	34
New York	31,353	3,284	874	1,890	5,301	314	4,683	5,907	9,100
Adelphi University	434	53	37	54	0	0	32	257	1
Albany Medical Center Graduate School	84	0	0	0	0	0	84	0	0
Alfred University	25	0	0	0	0	0	0	25	0
CUNY Bernard Baruch College	389	0	0	33	85	0	0	15	256
CUNY Brooklyn College	573	23	11	34	215	0	17	57	216
CUNY City College	366	39	9	14	181	0	49	44	30
CUNY College of Staten Island St George	83	0	19	0	64	0	0	0	0
CUNY Graduate School and Univ Center	1,825	284	0	70	0	0	326	454	691
CUNY Herbert H. Lehman College	75	0	0	55	0	0	20	0	0
CUNY Hunter College	457	34	0	12	50	0	116	49	196
CUNY John Jay College of Crim Justice	432	0	0	0	0	0	31	88	313
CUNY Mt. Sinai Sch of Medicine	135	0	0	0	0	0	135	0	0
CUNY Queens College	475	17	10	16	221	0	7	95	109
Clarkson University	99	76	0	23	0	0	0	0	0
College of New Rochelle	114	0	0	0	0	0	0	114	0
College of St Rose	35	0	0	0	0	0	16	0	19
Columbia University Main Division	1,673	239	100	72	178	0	320	42	722
Columbia University Teachers College	1,331	0	0	192	0	0	50	761	328
Cooper Union	0	0	0	0	0	0	0	0	0
Cornell University	2,624	408	81	189	121	174	821	65	765
Fordham University	470	2	0	8	0	0	59	147	254
Hofstra University	507	0	0	8	137	0	27	332	3
Iona College	357	0	0	0	245	0	6	106	0
Ithaca College	0	0	0	0	0	0	0	0	0
Long Island University	563	22	0	12	0	0	78	206	245
Manhattan College	12	0	0	0	0	0	12	0	0
Marist College	248	0	0	0	212	0	0	36	0
New School for Social Research	1,066	0	0	0	0	0	0	378	688
New York Institute of Technology	881	0	0	0	613	0	75	193	0
New York Medical College	114	0	0	0	0	0	114	0	0
New York University	2,537	196	46	180	400	0	261	204	1,250
Niagara University	13	0	0	0	0	0	13	0	0
Pace University	982	0	0	0	812	0	0	104	66
Polytechnic University	820	183	0	46	589	0	0	0	2
Pratt Institute	0	0	0	0	0	0	0	0	0
Rensselaer Polytechnic Institute	597	206	30	72	168	0	25	33	63
Rochester Institute of Technology	514	25	0	124	325	0	0	40	0
Rockefeller University	121	8	0	0	0	0	113	0	0
Russell Sage College	266	0	0	0	0	0	0	89	177
SUNY - Albany	1,088	123	55	63	101	0	58	286	402
SUNY - Binghamton	714	82	46	60	0	0	52	86	388
SUNY - Buffalo	1,639	268	80	101	92	0	386	316	396
SUNY - Coll of Env Science and Forestry	393	43	91	0	0	140	119	0	0
SUNY - Health Sci Ctr at Brooklyn	87	0	0	0	0	0	87	0	0
SUNY - Health Sci Ctr at Syracuse	67	0	0	0	0	0	67	0	0
SUNY - Stony Brook	1,696	329	155	182	105	0	342	146	437
SUNY College at Brockport	361	0	0	39	0	0	34	36	252
SUNY College at Buffalo	84	7	24	14	0	0	39	0	0
SUNY College at Cortland	13	0	0	0	0	0	0	13	0
SUNY College at Fredonia	19	3	2	0	0	0	14	0	0
SUNY College at Geneseo	16	0	0	0	0	0	16	0	0
SUNY College at New Paltz	205	8	6	60	0	0	32	70	29
SUNY College at Oneonta	5	0	3	0	0	0	2	0	0

Continued on next page.

Table E-2. Graduate science enrollment in all institutions
by geographic division, State, institution,
and major field of science: 1989
-Continued

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathe-matical sciences	Computer sciences	Agricul-tural sciences	Bio-logical	Psychol-ogy	Social sciences
New York, continued									
SUNY College at Oswego	223	29	0	0	0	0	0	194	0
SUNY College at Plattsburgh	36	2	0	0	0	0	9	25	0
SUNY College at Potsdam	2	0	0	2	0	0	0	0	0
SUNY College of Technology at Utica/Rom	63	0	0	0	63	0	0	0	0
SUNY State College of Optometry	0	0	0	0	0	0	0	0	0
Sarah Lawrence College	44	0	0	0	0	0	44	0	0
St Bonaventure University	14	4	0	0	0	0	4	6	0
St John's University	307	9	0	17	0	0	45	118	118
Syracuse University	1,140	161	21	77	207	0	75	109	490
Union College(NY)	72	0	0	0	71	0	1	0	0
University of Rochester	1,097	395	48	61	46	0	265	88	194
Vassar College	6	6	0	0	0	0	0	0	0
Wagner College	23	0	0	0	0	0	23	0	0
Yeshiva University	642	0	0	0	0	0	162	480	0
Pennsylvania	12,208	1,802	502	920	1,652	191	1,937	1,509	3,695
Bloomsburg University of Pennsylvania	15	0	0	0	0	0	15	0	0
Bryn Mawr College	116	22	4	4	0	0	10	59	17
Bucknell University	33	11	0	2	0	0	6	14	0
California University of Pennsylvania	142	0	16	0	46	0	21	30	29
Carnegie-Mellon University	1,008	133	0	73	170	0	58	31	543
Clarion University of Pennsylvania	77	0	0	0	0	0	13	0	64
Drexel University	451	115	81	138	0	0	81	36	0
Duquesne University	192	32	0	0	0	0	18	127	15
East Stroudsburg Univ of Pennsylvania	105	4	0	0	38	0	49	0	14
Edinboro University of Pennsylvania	111	0	0	0	0	0	14	97	0
Gannon University	5	0	0	0	0	0	4	0	1
Hahnemann University	269	0	0	0	0	8	148	113	0
Indiana University of Pennsylvania	103	32	0	0	0	0	11	60	0
Kutztown University of Pennsylvania	194	0	0	11	30	0	0	108	45
Lehigh University	529	150	17	51	225	0	37	19	30
Mansfield University of Pennsylvania	11	0	0	0	0	0	0	11	0
Marywood College	137	0	0	0	0	0	0	59	78
Millersville University of Pennsylvania	78	0	0	7	0	0	5	66	0
Pennsylvania State University	2,443	474	260	131	141	183	456	230	568
Phila College of Osteopathic Medicine	0	0	0	0	0	0	0	0	0
Philadelphia Coll of Pharmacy and Sci	24	7	0	0	0	0	17	0	0
Shippensburg University of Pennsylvania	259	8	31	30	64	0	24	38	64
Slippery Rock University of Pennsylvani	0	0	0	0	0	0	0	0	0
St Joseph's University	161	34	0	0	76	0	0	0	51
Swarthmore College	0	0	0	0	0	0	0	0	0
Temple University	1,151	105	14	153	96	0	188	104	491
The Medical College of Pennsylvania	72	0	0	0	0	0	72	0	0
Thomas Jefferson University	90	0	0	0	0	0	90	0	0
University of Pennsylvania	1,868	291	12	53	198	0	381	53	880
University of Pittsburgh	1,683	280	50	101	269	0	124	94	765
University of Scranton	71	15	0	0	0	0	26	30	0
Villanova University	523	63	0	82	299	0	55	24	0
West Chester University of Pennsylvania	285	25	17	83	0	0	14	106	40
Widener University	0	0	0	0	0	0	0	0	0
Wilkes University	2	1	0	1	0	0	0	0	0
East North Central	49,400	6,430	2,157	4,202	4,545	1,504	8,527	8,048	13,987
Illinois	16,543	1,897	383	1,365	2,473	315	2,632	2,401	5,077
Bradley University	78	2	0	0	61	0	1	14	0
Chicago Coll of Osteo Medicine	0	0	0	0	0	0	0	0	0
Chicago School of Prof Psych	144	0	0	0	0	0	0	144	0
Chicago State University	171	0	0	21	0	0	11	0	139
De Paul University	1,288	35	0	29	930	0	9	106	179
Eastern Illinois University	134	4	0	21	0	0	32	49	28
Forest Institute of Prof Psych	260	0	0	0	0	0	0	260	0
Governors State University	337	29	0	0	0	0	26	177	105
Illinois Institute of Technology	849	49	0	14	558	0	116	112	0
Illinois State University	482	36	0	49	61	0	79	152	105
Loyola University of Chicago	480	46	0	84	0	0	131	119	100

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Table E-2. Graduate science enrollment in all institutions
by geographic division, State, institution,
and major field of science: 1989
-Continued

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathematical sciences	Computer sciences	Agricultural sciences	Biological	Psychology	Social sciences
Illinois, continued									
Northeastern Illinois University	818	21	8	133	101	0	69	0	486
Northern Illinois University	697	105	41	74	0	0	79	87	311
Northwestern University	1,085	243	21	42	163	0	222	94	300
Roosevelt University	438	28	0	55	0	0	13	31	311
Rush University	92	0	0	0	0	0	92	0	0
Sangamon State University	576	0	37	48	91	0	32	209	159
Southern Illinois Univ at Carbondale	1,069	65	53	52	57	50	314	168	330
Southern Illinois Univ at Edwardsville	420	34	67	50	0	0	16	124	129
University of Chicago	1,960	344	56	119	37	0	297	120	987
University of Health Sciences (Chicago)	113	0	0	0	0	0	46	67	0
University of Illinois at Chicago	1,409	206	34	258	0	0	316	98	497
University of Illinois at Urbana	3,317	627	66	300	356	265	681	225	797
Western Illinois University	306	23	0	16	58	0	50	45	114
Indiana	5,993	1,017	206	495	337	193	1,077	736	1,932
Ball State University	276	15	16	21	35	0	46	71	72
Butler University	35	15	0	0	0	0	4	0	16
Indiana State University	312	19	0	13	0	0	77	62	141
Indiana University	2,548	313	101	159	160	0	395	216	1,204
Indiana Wesleyan University	0	0	0	0	0	0	0	0	0
Purdue University	2,129	465	89	266	142	193	495	240	239
Rose-Hulman Institute of Technology	14	14	0	0	0	0	0	0	0
Saint Francis College	62	0	0	0	0	0	0	62	0
University of Evansville	10	0	0	0	0	0	0	10	0
University of Notre Dame	554	176	0	36	0	0	60	75	207
Valparaiso University	53	0	0	0	0	0	0	0	53
Michigan	9,319	1,176	496	878	632	401	1,632	1,332	2,772
Andrews University	59	0	0	0	20	0	11	28	0
Central Michigan University	265	37	0	11	19	0	24	118	56
Eastern Michigan University	681	88	0	133	0	0	70	133	257
Grand Valley State University	64	0	0	0	13	0	0	0	51
Michigan State University	2,372	354	102	185	171	351	505	156	548
Michigan Technological University	179	49	21	17	12	47	33	0	0
Northern Michigan University	130	1	0	0	0	0	22	0	107
Oakland University	310	40	0	191	0	0	17	0	62
University of Detroit	416	45	0	5	73	0	17	168	108
University of Michigan	2,307	316	327	174	0	3	519	260	708
Wayne State University	1,454	212	11	73	238	0	387	229	304
Western Michigan University	1,082	34	35	89	86	0	27	240	571
Ohio	11,750	1,668	613	957	798	288	2,003	2,713	2,710
Air Force Institute of Technology	98	0	0	39	40	0	0	0	19
Antioch University	956	0	88	0	0	43	0	792	33
Bowling Green State University	541	39	40	64	56	0	85	106	151
Case Western Reserve University	842	136	4	70	100	0	371	49	112
Cleveland State University	664	62	0	13	199	0	70	101	219
John Carroll University	64	34	0	9	0	0	21	0	0
Kent State University	725	104	56	133	0	0	104	118	210
Medical College of Ohio at Toledo	0	0	0	0	0	0	0	0	0
Miami University	414	65	54	27	0	0	83	97	88
NE Ohio Univ Med School	0	0	0	0	0	0	0	0	0
Ohio State University	3,197	471	152	273	234	245	708	253	861
Ohio University	688	87	57	100	0	0	93	156	195
Union Institute	438	0	0	2	10	0	0	396	30
University of Akron	834	308	37	51	0	0	58	112	268
University of Cincinnati	1,070	209	57	68	0	0	260	176	300
University of Dayton	187	0	0	6	43	0	22	44	72
University of Toledo	367	84	23	43	0	0	27	102	88
Wright State University	518	56	45	36	116	0	87	147	31
Xavier University	64	0	0	0	0	0	0	64	0
Youngstown State University	83	13	0	23	0	0	14	0	33
Wisconsin	5,795	672	459	507	305	307	1,183	866	1,496
Marquette University	230	65	0	60	0	0	31	14	60
Medical College of Wisconsin	84	0	0	0	0	0	84	0	0
Milwaukee School of Engineering	0	0	0	0	0	0	0	0	0
University of Wisconsin - Eau Claire	39	0	0	12	0	0	14	13	0

Continued on next page.

Table E-2. Graduate science enrollment in all institutions by geographic division, State, institution, and major field of science: 1989 -Continued

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathematical sciences	Computer sciences	Agricultural sciences	Biological	Psychology	Social sciences
Wisconsin, continued									
University of Wisconsin - Green Bay	68	0	68	0	0	0	0	0	0
University of Wisconsin - La Crosse	26	0	0	0	0	0	26	0	0
University of Wisconsin - Madison	3,872	475	295	342	200	296	904	367	993
University of Wisconsin - Milwaukee	1,117	125	45	74	105	0	76	343	349
University of Wisconsin - Oshkosh	166	7	0	19	0	0	8	38	94
University of Wisconsin - Platteville	11	0	0	0	0	11	0	0	0
University of Wisconsin - River Falls	45	0	0	0	0	0	0	45	0
University of Wisconsin - Stevens Point	69	0	51	0	0	0	18	0	0
University of Wisconsin - Stout	45	0	0	0	0	0	18	27	0
University of Wisconsin - Whitewater	23	0	0	0	0	0	4	19	0
West North Central	19,070	2,008	576	1,402	1,625	1,624	4,041	3,401	4,393
Iowa	3,426	506	82	401	265	293	829	236	814
Drake University	78	2	0	0	0	0	15	6	55
Iowa State University of Sci & Tech	1,937	311	38	188	76	293	483	114	434
Loras College	30	0	0	0	0	0	0	30	0
Maharishi International University	68	5	0	4	16	0	21	22	0
Marycrest College	46	0	0	0	46	0	0	0	0
Univ. of Osteopathic Med & Health Sci	0	0	0	0	0	0	0	0	0
University of Iowa	1,216	185	42	194	127	0	305	51	312
University of Northern Iowa	51	3	2	15	0	0	5	13	13
Kansas	3,364	289	87	208	172	323	727	782	776
Emporia State University - Kansas	133	18	0	19	0	0	32	64	0
Fort Hays State University	68	1	9	1	0	0	13	36	8
Kansas State University	1,226	97	10	83	63	323	296	142	212
Pittsburg State University	273	17	0	8	0	0	25	207	16
University of Kansas	1,338	120	54	58	73	0	353	258	422
Washburn University of Topeka	30	0	0	0	0	0	0	30	0
Wichita State University	296	36	14	39	36	0	8	45	118
Minnesota	5,058	466	103	270	546	351	896	1,339	1,087
Bemidji State University	16	0	7	4	1	0	4	0	0
Mankato State University	278	19	17	19	55	0	25	32	111
Mayo Graduate School	57	0	0	0	0	0	57	0	0
Moorhead State University	475	0	0	0	241	0	0	234	0
St Mary's College of Minnesota	431	0	0	0	0	0	0	431	0
St. Cloud State University	29	0	0	7	0	0	10	12	0
University of Minnesota	3,772	447	79	240	249	351	800	630	976
Missouri	4,203	467	152	240	411	240	959	727	1,007
Central Missouri State University	139	0	0	12	0	5	5	72	45
Kirksville College of Osteopathic Med	0	0	0	0	0	0	0	0	0
Lincoln University	128	0	0	0	0	0	0	0	128
Northeast Missouri State University	10	0	0	2	0	0	8	0	0
Northwest Missouri State University	86	0	0	0	15	12	4	55	0
Southeast Missouri State University	37	0	0	0	0	0	37	0	0
Southwest Missouri State University	77	0	0	11	0	0	21	0	45
St. Louis University	392	16	36	19	0	0	156	85	80
University of Health Sciences (Kansas C	0	0	0	0	0	0	0	0	0
University of Missouri - Columbia	1,206	108	47	88	0	223	301	101	338
University of Missouri - Kansas City	679	50	16	21	135	0	98	208	151
University of Missouri - Rolla	310	93	21	20	176	0	0	0	0
University of Missouri - St Louis	313	65	0	24	0	0	43	121	60
Washington University	826	135	32	43	85	0	286	85	160
Nebraska	1,780	146	80	215	65	257	340	229	448
Creighton University	82	15	13	24	0	0	30	0	0
Kearney State College	51	0	0	29	7	0	15	0	0
University of Nebraska - Lincoln	1,102	131	67	73	58	257	177	89	250
University of Nebraska - Omaha	473	0	0	89	0	0	46	140	198

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Table E-2. Graduate science enrollment in all institutions by geographic division, State, institution, and major field of science: 1989 -Continued

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathe-matical sciences	Computer sciences	Agricul-tural sciences	Bio-logical	Psychol-ogy	Social sciences
Nebraska, continued									
University of Nebraska Medical Center	72	0	0	0	0	0	72	0	0
North Dakota	756	88	22	43	131	111	182	59	120
North Dakota State University	493	59	0	31	108	111	112	16	56
University of North Dakota	263	29	22	12	23	0	70	43	64
South Dakota	483	46	50	25	35	49	108	29	141
South Dakota School of Mines and Tech	86	13	50	0	23	0	0	0	0
South Dakota State University	230	26	0	10	0	49	72	0	73
University of South Dakota	167	7	0	15	12	0	36	29	68
South Atlantic	42,058	4,104	2,157	3,173	4,671	1,619	7,716	6,348	12,270
Delaware	874	160	108	86	95	19	100	60	246
Delaware State University	18	18	0	0	0	0	0	0	0
University of Delaware	856	142	108	86	95	19	100	60	246
District of Columbia	5,732	314	42	249	735	0	610	431	3,351
Catholic University of America	464	98	0	7	0	0	41	105	213
Gallaudet University	0	0	0	0	0	0	0	0	0
George Washington University	2,404	30	41	188	509	0	233	167	1,236
Georgetown University	793	55	0	0	0	0	198	0	540
Howard University	551	44	1	13	48	0	116	21	308
The American University	1,476	87	0	33	178	0	22	117	1,039
University of the District of Columbia	44	0	0	8	0	0	0	21	15
Florida	8,316	784	580	592	1,112	367	1,073	1,852	1,956
Florida A & M University	89	0	0	0	0	0	0	16	73
Florida Atlantic University	316	34	0	17	61	0	27	27	150
Florida Institute of Technology	707	84	55	50	264	0	42	141	71
Florida International University	412	18	13	2	42	7	85	66	179
Florida State University	1,252	163	153	104	148	0	146	128	410
Jacksonville University	20	0	0	15	5	0	0	0	0
Nova University	1,250	0	39	50	152	0	0	918	91
University of Central Florida	479	67	0	56	160	0	35	52	109
University of Florida	1,933	273	39	149	150	360	411	150	401
University of Miami	752	66	146	51	0	0	197	103	189
University of South Florida	801	79	135	65	0	0	107	137	278
University of West Florida	305	0	0	33	130	0	23	114	5
Georgia	4,568	525	168	409	305	211	897	813	1,240
Augusta College	25	0	0	0	0	0	0	25	0
Clark Atlanta University	312	47	0	103	0	0	28	0	134
Emory University	466	127	0	29	0	0	160	88	62
Fort Valley State University	66	0	0	0	0	0	0	66	0
Georgia College	176	0	0	0	46	0	6	42	82
Georgia Institute of Technology	704	182	68	64	180	0	42	67	101
Georgia Southern College	59	0	0	0	0	0	6	12	41
Georgia State University	930	56	33	119	15	0	140	223	344
Institute of Paper Science & Technology	0	0	0	0	0	0	0	0	0
Medical College of Georgia	67	0	0	0	0	0	67	0	0
Mercer University	29	0	0	0	29	0	0	0	0
Morehouse School of Medicine	0	0	0	0	0	0	0	0	0
University of Georgia	1,438	113	67	94	35	211	442	165	311
Valdosta State College	197	0	0	0	0	0	0	37	160
West Georgia College	99	0	0	0	0	0	6	88	5
Maryland	6,267	563	255	475	524	134	1,501	1,174	1,641
Coppin State College	28	0	0	0	0	0	0	0	28
Frostburg State University	46	0	0	0	0	11	2	33	0
Hood College	524	0	0	112	0	0	180	58	174
Johns Hopkins University	973	79	36	57	34	0	449	67	251
Loyola College	445	0	0	0	0	0	0	445	0
Morgan State University	65	0	0	5	0	0	0	0	60
Towson State University	252	0	0	0	0	0	23	186	43
Uniformed Serv Univ of the Hlth Science	92	0	0	0	0	0	64	28	0
University of Baltimore	214	0	0	0	0	0	0	63	151
University of Maryland - Balt Prof Sch	317	0	5	0	0	0	312	0	0
University of Maryland - Baltimore Cnty	679	40	3	69	233	0	118	88	128
University of Maryland - College Park	2,501	444	186	232	220	123	353	137	806
University of Maryland Eastern Shore	62	0	25	0	37	0	0	0	0
Washington College	69	0	0	0	0	0	0	69	0
North Carolina	6,501	752	398	527	352	421	1,806	719	1,526
Appalachian State University	217	15	0	30	0	0	21	90	61
Duke University	973	140	35	38	66	33	337	54	270
East Carolina University	276	28	21	36	0	0	71	88	32
North Carolina A & T State University	89	23	0	0	0	0	17	0	49

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Table E-2. Graduate science enrollment in all institutions by geographic division, State, institution, and major field of science: 1989 -Continued

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathe-matical sciences	Computer sciences	Agricul-tural sciences	Bio-logical	Psychol-ogy	Social sciences
North Carolina, continued									
North Carolina Central University	62	6	0	11	0	0	13	30	2
North Carolina State Univ at Raleigh	1,835	158	82	237	109	388	410	111	340
Univ of North Carolina at Chapel Hill	2,091	294	217	101	111	0	702	122	544
Univ of North Carolina at Charlotte	295	12	0	20	66	0	26	50	121
Univ of North Carolina at Greensboro	282	20	0	7	0	0	65	125	65
University of North Carolina/Wilmington	58	3	43	4	0	0	8	0	0
Wake Forest University	206	32	0	16	0	0	123	21	14
Western Carolina University	117	21	0	27	0	0	13	28	28
South Carolina	2,137	303	160	248	229	121	531	159	386
Clemson University	768	127	0	101	115	121	195	20	89
College of Charleston	74	0	29	0	0	0	0	0	45
Furman University	5	5	0	0	0	0	0	0	0
Medical University of South Carolina	105	0	0	0	0	0	105	0	0
University of South Carolina	1,115	171	131	137	114	0	188	122	252
Winthrop College	70	0	0	10	0	0	43	17	0
Virginia	6,501	619	369	449	1,217	279	974	894	1,700
College of William and Mary	302	59	107	17	55	0	16	17	31
Eastern Virginia Medical School	70	0	0	0	0	0	11	59	0
George Mason University	1,600	17	0	93	789	0	31	175	495
Hampton University	59	27	0	8	0	0	24	0	0
Hollins College	8	0	0	0	0	0	0	8	0
Institute of Textile Technology	0	0	0	0	0	0	0	0	0
James Madison University	101	0	0	3	11	0	11	43	33
Old Dominion University	671	64	92	29	103	0	124	57	202
Radford University	163	0	0	0	0	0	0	141	22
University of Richmond	23	0	0	0	0	0	10	8	5
University of Virginia	1,095	182	68	85	99	0	182	79	400
Virginia Commonwealth University	832	64	0	50	66	0	288	94	270
Virginia Polytechnic Inst and State Uni	1,530	200	101	154	94	278	268	193	242
Virginia State University	47	6	1	10	0	1	9	20	0
West Virginia	1,162	84	77	138	102	67	224	246	224
Marshall University	163	29	0	17	0	0	51	23	43
Univ of West Virginia Coll of Grad Stds	286	0	37	0	102	0	0	132	15
University of Charleston	11	0	0	0	0	0	11	0	0
West Virginia Institute of Technology	0	0	0	0	0	0	0	0	0
West Virginia Sch of Osteopathic Med	0	0	0	0	0	0	0	0	0
West Virginia University	702	55	40	121	0	67	162	91	166
East South Central	12,107	1,244	280	913	1,252	813	2,581	2,337	2,687
Alabama	3,175	400	52	256	486	232	760	451	538
Alabama A & M University	206	38	0	0	78	0	67	0	23
Alabama State University	20	0	0	13	0	0	7	0	0
Auburn University	946	102	14	78	43	201	171	96	241
Jacksonville State University	108	0	0	11	0	0	19	34	44
The University of Alabama	519	68	38	46	31	0	59	99	178
The University of Alabama at Birmingham	493	52	0	16	53	0	322	50	0
The University of Alabama in Huntsville	416	134	0	81	181	0	19	1	0
Troy State University at Montgomery	182	0	0	0	26	0	0	143	13
Tuskegee University	53	6	0	0	0	31	16	0	0
University of Montevallo	0	0	0	0	0	0	0	0	0
University of South Alabama	232	0	0	11	74	0	80	28	39
Kentucky	2,727	221	87	271	119	180	545	473	831
Eastern Kentucky University	224	10	16	15	0	10	23	49	101
Morehead State University	54	0	0	0	0	0	20	20	14
Murray State University	186	16	16	10	0	30	22	26	66
Spalding University	119	0	0	0	0	0	0	119	0
University of Kentucky	1,311	117	55	[illegible]	98	122	275	114	444
University of Louisville	615	66	0	156	0	0	184	95	114
Western Kentucky University	218	12	0	4	21	18	21	50	92
Mississippi	2,089	228	47	86	305	272	333	373	445
Jackson State University	211	19	0	12	86	0	46	0	48
Mississippi State University	811	44	20	31	81	272	109	81	173
Mississippi University for Women	0	0	0	0	0	0	0	0	0
University of Mississippi	549	66	14	26	35	0	117	172	119
University of Southern Mississippi	518	99	13	17	103	0	61	120	105
Tennessee	4,116	395	94	300	342	129	943	1,040	873
Austin Peay State University	45	0	0	0	0	0	11	34	0
East Tennessee State University	244	11	0	9	45	0	69	31	79
Fisk University	21	10	0	0	0	0	0	7	4

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Table E-2. Graduate science enrollment in all institutions by geographic division, State, institution, and major field of science: 1989 -Continued

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathematical sciences	Computer sciences	Agricultural sciences	Biological	Psychology	Social sciences
Tennessee, continued									
Meharry Medical College	35	0	0	0	0	0	35	0	0
Memphis State University	554	43	30	114	0	0	71	173	123
Middle Tennessee State University	338	21	0	27	28	0	30	197	35
Tennessee State University	165	7	0	16	0	17	13	77	35
Tennessee Technological University	132	9	0	14	0	0	62	47	0
University of Tennessee at Chattanooga	198	0	0	0	45	0	0	112	41
University of Tennessee at Knoxville	1,559	191	55	88	176	112	380	183	374
University of Tennessee, Memphis	106	0	0	0	0	0	106	0	0
Vanderbilt University	719	103	9	32	48	0	166	179	182
West South Central	24,524	3,093	1,575	1,570	3,215	1,657	4,406	4,058	4,950
Arkansas	1,134	104	12	56	36	176	231	312	207
Arkansas State University	230	6	0	16	14	0	24	121	49
University of Arkansas	604	89	12	33	22	176	142	49	81
University of Arkansas - Med Sci Campus	52	0	0	0	0	0	52	0	0
University of Arkansas at Little Rock	100	9	0	7	0	0	0	17	67
University of Central Arkansas	148	0	0	0	0	0	13	125	10
Louisiana	3,106	327	246	229	407	145	714	456	582
Grambling State University	15	0	0	0	0	0	15	0	0
Louisiana State University System	1,665	218	171	98	89	145	447	150	347
Louisiana Tech University	49	6	0	6	15	0	22	0	0
Loyola University in New Orleans	1	0	0	0	0	0	1	0	0
McNeese State University	91	8	0	14	0	0	37	32	0
Nicholls State University	54	0	0	14	0	0	0	40	0
Northeast Louisiana University	141	21	26	0	0	0	31	63	0
Northwestern State Univ of Louisiana	46	0	0	0	0	0	3	43	0
Southeastern Louisiana University	29	0	0	0	0	0	16	13	0
Southern University A & M College	138	15	0	10	41	0	0	27	45
Tulane University of Louisiana	487	51	16	34	39	0	109	64	174
University of Southwestern Louisiana	390	8	33	53	223	0	33	24	16
Xavier University	0	0	0	0	0	0	0	0	0
Oklahoma	2,255	250	180	170	136	140	426	392	561
East Central University	10	0	0	0	0	0	0	10	0
Oklahoma State University	1,134	110	44	88	105	140	189	238	220
Oral Roberts University	13	0	0	0	0	0	13	0	0
Southwestern Oklahoma State University	70	8	0	18	0	0	8	20	16
University of Oklahoma	873	132	117	50	0	0	204	51	319
University of Tulsa	155	0	19	14	31	0	12	73	6
Texas	18,029	2,412	1,137	1,115	2,636	1,196	3,035	2,898	3,600
Abilene Christian University	104	2	0	0	0	0	8	64	30
Angelo State University	94	0	0	7	0	11	13	50	13
Baylor College of Dentistry	0	0	0	0	0	0	0	0	0
Baylor College of Medicine	213	0	0	0	0	0	213	0	0
Baylor University	280	50	41	7	22	0	18	102	40
Corpus Christi State University	88	0	0	0	37	0	18	33	0
East Texas State University	377	31	11	27	152	21	9	86	40
Incarnate Word College	46	0	0	0	0	0	24	0	22
Lamar University	121	17	0	4	60	0	11	14	15
Midwestern State University	76	0	0	0	39	0	15	14	8
Pan American University	15	0	0	0	0	0	15	0	0
Prairie View A & M University	112	13	0	26	0	17	10	0	46
Rice University	533	182	67	53	55	0	52	43	81
Sam Houston State University	328	29	0	22	14	32	12	61	158
Southern Methodist University	471	6	36	51	232	0	15	27	104
Southwest Texas State University	490	25	0	28	80	0	68	49	240
St Mary's University of San Antonio	0	0	0	0	0	0	0	0	0
Stephen F. Austin State University	205	13	12	20	5	62	40	53	0
Sul Ross State University	59	0	13	0	0	16	15	0	15
Tarleton State University	55	0	0	0	0	34	12	0	9
Texas A & I University	120	3	11	16	12	39	1	29	9
Texas A & M University	3,143	450	327	126	210	811	418	288	513
Texas Christian University	126	36	15	0	24	0	9	34	8
Texas College of Osteopathic Medicine	0	0	0	0	0	0	0	0	0
Texas Southern University	207	27	0	20	0	0	31	90	39
Texas Tech University	880	130	63	71	39	137	129	118	193
Texas Woman's University	614	12	0	74	0	0	281	221	26

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Table E-2. Graduate science enrollment in all institutions by geographic division, State, institution, and major field of science: 1989 -Continued

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathematical sciences	Computer sciences	Agricultural sciences	Biological	Psychology	Social sciences
Texas, continued									
Trinity University	0	0	0	0	0	0	0	0	0
Univ of Texas Hlth Sci Ctr San Antonio	124	0	0	0	0	0	124	0	0
Univ of Texas Hlth Sci Ctr at Houston	364	0	0	0	0	0	331	17	16
Univ of Texas MD Anderson Cancer Center	0	0	0	0	0	0	0	0	0
Univ of Texas Med Branch at Galveston	102	0	0	0	0	0	102	0	0
Univ of Texas SW Medical Ctr at Dallas	247	0	0	0	0	0	193	54	0
Univ of Texas at Arlington	788	87	43	63	243	0	42	33	277
Univ of Texas at Austin	2,435	657	167	158	218	0	324	145	766
Univ of Texas at Dallas	886	157	94	87	313	0	53	38	144
Univ of Texas at El Paso	362	28	51	17	48	0	39	51	128
University of Central Texas	107	0	0	0	36	0	0	60	11
University of Houston - Victoria	29	0	0	0	0	0	0	29	0
University of Houston at Clear Lake Cit	1,092	113	0	48	340	0	38	553	0
University of Houston-University Park	1,160	188	111	67	173	0	106	220	295
University of North Texas	1,111	133	0	82	209	0	178	215	294
University of Texas at San Antonio	176	16	59	26	31	0	44	0	0
University of Texas at Tyler	159	0	0	11	44	0	4	63	37
University of Texas of the Permian Basi	50	0	16	0	0	0	5	29	0
West Texas State University	80	7	0	4	0	16	15	15	23
Mountain	16,910	2,484	1,930	1,289	1,287	1,101	2,547	2,060	4,212
Arizona	4,599	718	568	275	483	140	666	583	1,166
Arizona State University	1,483	188	61	82	282	41	146	106	577
Northern Arizona University	726	8	77	18	0	30	76	391	126
University of Arizona	2,390	522	430	175	201	69	444	86	463
Colorado	4,982	630	555	454	250	291	611	753	1,438
Colorado School of Mines	474	89	245	54	0	0	0	0	86
Colorado State University	1,255	115	143	89	57	291	280	120	160
University of Colorado	2,281	380	160	164	193	0	302	209	873
University of Denver	616	38	0	98	0	0	13	162	305
University of Northern Colorado	356	8	7	49	0	0	16	262	14
Idaho	923	87	122	52	48	188	230	42	154
Idaho State University	260	20	32	21	0	0	96	23	68
University of Idaho	663	67	90	31	48	188	134	19	86
Montana	834	135	119	77	51	77	201	65	109
Montana College Mineral Sci & Technolog	7	4	0	0	0	0	0	0	3
Montana State University	392	113	17	45	29	30	141	0	17
University of Montana	435	18	102	32	22	47	60	65	89
Nevada	778	92	162	56	33	38	114	80	203
University of Nevada at Las Vegas	182	20	19	11	0	0	22	23	87
University of Nevada at Reno	596	72	143	45	33	38	92	57	116
New Mexico	1,791	337	184	142	155	118	229	212	414
Eastern New Mexico University	93	9	0	12	0	0	11	41	20
New Mexico Highlands University	40	7	0	0	0	0	12	17	4
New Mexico Institute of Mining and Tech	161	31	79	16	29	0	6	0	0
New Mexico State University	591	114	46	33	42	118	52	52	134
University of New Mexico	906	176	59	81	84	0	148	102	256
Utah	2,378	424	113	175	235	197	381	274	579
Brigham Young University	508	73	15	48	64	11	63	110	124
University of Utah	1,040	255	90	90	80	0	191	51	283
Utah State University	830	96	8	37	91	186	127	113	172
Wyoming	625	61	107	58	32	52	115	51	149
University of Wyoming	625	61	107	58	32	52	115	51	149
Pacific	45,021	4,873	2,351	2,577	4,725	1,659	7,232	9,373	12,231
Alaska	394	46	89	18	0	40	98	45	58
University of Alaska Southeast	20	0	0	0	0	0	0	0	20
University of Alaska at Anchorage	24	0	0	0	0	0	5	19	0
University of Alaska at Fairbanks	350	46	89	18	0	40	93	26	38
California	36,389	3,889	1,476	2,074	4,194	757	5,493	8,735	9,771
Azusa Pacific University	103	0	0	0	103	0	0	0	0
Biola University	173	0	0	0	0	0	0	173	0
Calif Poly State Univ at San Luis Obisp	220	5	0	19	73	79	37	0	7
Calif Sch of Prof Psych - Fresno	235	0	0	0	0	0	0	235	0

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Table E-2. Graduate science enrollment in all institutions
by geographic division, State, institution,
and major field of science: 1989
-Continued

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathematical sciences	Computer sciences	Agricultural sciences	Biological	Psychology	Social sciences
California, continued									
Calif Sch of Prof Psych - Los Angeles	501	0	0	0	0	0	0	501	0
Calif Sch of Prof Psych - San Diego	480	0	0	0	0	0	0	480	0
Calif Sch of Prof Psych-Berkeley/Alamed	501	0	0	0	0	0	0	501	0
Calif State Polytechnic Univ at Pomona	322	23	0	30	59	89	43	0	78
Calif State Univ at Dominguez Hills	369	0	0	0	0	0	32	177	160
Calif State Univ at Fullerton	711	22	44	66	201	0	51	65	262
Calif State Univ at Hayward	757	15	12	56	28	0	18	310	318
Calif State Univ at Long Beach	1,025	81	24	58	72	0	105	158	527
Calif State Univ at Los Angeles	608	43	53	53	0	0	71	178	210
Calif State Univ at San Bernardino	242	0	0	18	0	0	67	73	84
Calif State Univ of Stanislaus	134	0	0	0	0	0	13	62	59
Calif State University at Chico	359	0	13	0	102	17	39	89	99
Calif State University at Fresno	461	30	14	28	0	96	56	201	36
Calif State University at Northridge	633	94	22	59	151	0	102	109	96
Calif State University at Sacramento	479	21	0	26	98	0	30	84	220
California Institute of Integral Studie	300	0	0	0	0	0	0	300	0
California Institute of Technology	635	336	88	47	59	0	89	0	16
California State Univ - Bakersfield	186	0	20	0	0	0	0	39	127
Chapman College	172	0	0	0	0	0	47	125	0
Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0	0	0	0	0
Claremont Univ Center & Graduate School	502	0	0	37	124	0	13	101	227
Dominican College of San Rafael	99	0	0	0	0	0	0	55	44
Fuller Theological Seminary	295	0	0	0	0	0	0	295	0
Golden Gate University	618	0	0	0	0	0	0	0	618
Harvey Mudd College	0	0	0	0	0	0	0	0	0
Humboldt State University	173	0	7	12	0	103	51	0	0
John F Kennedy University	790	0	0	0	0	0	0	790	0
Loma Linda University	111	0	7	0	0	0	104	0	0
Loyola Marymount University	158	0	19	0	42	0	0	97	0
National University	50	0	0	0	50	0	0	0	0
Northrop University	95	0	0	0	95	0	0	0	0
Occidental College	2	0	0	0	0	0	2	0	0
Pacific Grad School of Prof Psych	347	0	0	0	0	0	0	347	0
Pacific States University	0	0	0	0	0	0	0	0	0
Pepperdine University	693	0	0	0	0	0	0	693	0
Rand Graduate Institute Policy Studies	60	0	0	0	0	0	0	0	60
San Diego State University	1,230	109	74	77	136	0	304	160	370
San Francisco State University	840	86	7	28	117	0	138	146	318
San Jose State University	1,010	132	72	30	243	0	103	99	331
Santa Clara University	584	0	0	15	477	0	0	92	0
Sonoma State University	149	0	0	0	0	0	25	81	43
Stanford University	1,961	348	143	245	347	0	342	55	481
The Fielding Institute	470	0	0	0	0	0	0	470	0
The Wright Institute	174	0	0	0	0	0	0	174	0
US International University	497	0	0	0	0	0	0	497	0
US Naval Postgraduate School	603	80	95	174	254	0	0	0	0
University of Calif at Berkeley	2,939	629	102	299	179	142	628	123	837
University of Calif at Davis	2,066	218	59	99	85	205	1,072	32	296
University of Calif at Irvine	861	201	0	49	110	0	203	40	258
University of Calif at Los Angeles	2,387	437	124	172	239	0	465	197	753
University of Calif at Riverside	672	130	27	61	19	26	216	48	145
University of Calif at San Diego	1,302	320	189	106	82	0	221	50	334
University of Calif at San Francisco	338	0	0	0	9	0	260	19	50
University of Calif at Santa Barbara	964	203	68	72	104	0	136	49	332
University of Calif at Santa Cruz	527	139	94	34	47	0	95	41	77
University of La Verne	181	0	0	0	0	0	0	0	181
University of Redlands	0	0	0	0	0	0	0	0	0
University of San Diego	50	0	20	0	0	0	0	0	30
University of San Francisco	73	13	0	0	19	0	10	0	31
University of Southern California	2,782	154	79	104	391	0	296	102	1,656

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Table E-2. Graduate science enrollment in all institutions by geographic division, State, institution, and major field of science: 1989 -Continued

Division, State, and institution	Total, sciences	Physical sciences	Earth, atm. & oc. sci.	Mathematical sciences	Computer sciences	Agricultural sciences	Biological	Psychology	Social sciences
California, continued									
University of the Pacific	51	20	0	0	0	0	9	22	0
West Coast University	79	0	0	0	79	0	0	0	0
Hawaii	1,335	105	131	20	48	82	280	85	584
University of Hawaii at Manoa	1,335	105	131	20	48	82	280	85	584
Oregon	2,735	401	264	231	239	348	510	80	662
Oregon Grad Inst of Science & Technolog	100	20	25	0	55	0	0	0	0
Oregon Health Sciences University	88	0	0	0	0	0	77	11	0
Oregon State University	1,239	140	151	101	95	348	310	0	94
Pacific University	0	0	0	0	0	0	0	0	0
Portland State University	503	18	49	54	15	0	17	25	325
Southern Oregon State College	29	0	0	5	0	0	0	0	24
University of Oregon	776	223	39	71	74	0	106	44	219
University of Portland	0	0	0	0	0	0	0	0	0
Washington	4,168	432	391	234	244	432	851	428	1,156
Central Washington University	102	0	0	2	0	9	12	79	0
Eastern Washington University	196	0	16	17	22	0	12	67	62
Gonzaga University	0	0	0	0	0	0	0	0	0
Pacific Lutheran University	73	0	0	0	24	0	0	0	49
Saint Martin's College	0	0	0	0	0	0	0	0	0
Seattle University	131	0	0	0	0	0	0	39	92
University of Washington	2,578	332	244	150	148	303	597	135	669
Walla Walla College	2	0	0	0	0	0	2	0	0
Washington State University	858	92	75	45	32	120	214	57	223
Western Washington University	228	8	56	20	18	0	14	51	61
Whitworth College	0	0	0	0	0	0	0	0	0
Outlying Areas	1,570	142	67	88	0	69	206	405	593
Guam	0	0	0	0	0	0	0	0	0
University of Guam	0	0	0	0	0	0	0	0	0
Puerto Rico	1,570	142	67	88	0	69	206	405	593
Catholic University of Puerto Rico	0	0	0	0	0	0	0	0	0
Center for Adv Studies on PR & Caribbea	213	0	0	0	0	0	0	213	0
Ponce School of Medicine	22	0	0	0	0	0	22	0	0
University of Puerto Rico	256	35	67	27	0	69	51	0	7
University of Puerto Rico - Rio Piedras	998	107	0	61	0	0	65	192	573
University of Puerto Rico Med Sci Campu	81	0	0	0	0	0	68	0	13

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989

Division, State, and institution	Total, engineering	Chemical	Civil	Electrical	Industrial	Mechanical	Metallurgical/ materials	All other engineering
Total, all institutions	104,922	6,411	15,073	33,306	11,750	16,184	4,546	17,652
New England	8,824	691	957	2,876	793	1,576	349	1,582
Connecticut	1,409	48	110	367	80	518	141	145
Central Connecticut State University	0	0	0	0	0	0	0	0
Connecticut College	0	0	0	0	0	0	0	0
Quinnipiac College	0	0	0	0	0	0	0	0
Southern Connecticut State University	0	0	0	0	0	0	0	0
St. Joseph College	0	0	0	0	0	0	0	0
The Hartford Graduate Center	531	0	0	160	0	325	22	24
Trinity College	0	0	0	0	0	0	0	0
University of Bridgeport	152	0	0	65	36	51	0	0
University of Connecticut	481	48	73	133	0	108	119	0
University of Hartford	0	0	0	0	0	0	0	0
University of New Haven	124	0	37	9	44	34	0	0
Wesleyan University	0	0	0	0	0	0	0	0
Western Connecticut State University	0	0	0	0	0	0	0	0
Yale University	121	0	0	0	0	0	0	121
Maine	134	17	57	42	0	11	0	7
University of Maine at Orono	134	17	57	42	0	11	0	7
University of New England	0	0	0	0	0	0	0	0
Massachusetts	6,510	597	709	2,252	694	960	185	1,113
American International College	0	0	0	0	0	0	0	0
Anna Maria College	0	0	0	0	0	0	0	0
Assumption College	0	0	0	0	0	0	0	0
Boston College	0	0	0	0	0	0	0	0
Boston University	559	0	0	241	44	0	0	274
Brandeis University	0	0	0	0	0	0	0	0
Bridgewater State College	0	0	0	0	0	0	0	0
Clark University	0	0	0	0	0	0	0	0
Emerson College	0	0	0	0	0	0	0	0
Framingham State College	0	0	0	0	0	0	0	0
Harvard University	174	0	13	0	0	0	0	161
MGH Institute of Health Professions	0	0	0	0	0	0	0	0
Mass College of Pharmacy/Allied Health	0	0	0	0	0	0	0	0
Massachusetts Institute of Technology	2,086	220	256	483	0	417	185	525
Mount Holyoke College	0	0	0	0	0	0	0	0
Northeastern University	1,080	26	167	507	224	156	0	0
Salem State College	0	0	0	0	0	0	0	0
Smith College	0	0	0	0	0	0	0	0
Southeastern Massachusetts University	67	0	0	56	0	0	0	11
Tufts University	321	47	78	135	0	42	0	19
University of Lowell	711	206	55	279	84	65	0	22
University of Massachusetts	688	68	75	277	111	119	0	38
Western New England College	127	0	0	15	104	8	0	0
Williams College	0	0	0	0	0	0	0	0
Woods Hole Oceanographic Institution	0	0	0	0	0	0	0	0
Worcester Polytechnic Institute	697	30	65	259	127	153	0	63
Worcester State College	0	0	0	0	0	0	0	0
New Hampshire	242	7	19	35	0	24	0	157
Dartmouth College	117	0	0	0	0	0	0	117
Rivier College	0	0	0	0	0	0	0	0
University of New Hampshire	125	7	19	35	0	24	0	40
Rhode Island	413	22	35	128	19	63	0	146
Brown University	104	0	0	0	0	0	0	104
Providence College	0	0	0	0	0	0	0	0
Rhode Island College	0	0	0	0	0	0	0	0
University of Rhode Island	309	22	35	128	19	63	0	42
Vermont	116	0	27	52	0	0	23	14
Goddard College	0	0	0	0	0	0	0	0
Marlboro College	0	0	0	0	0	0	0	0
Middlebury College	0	0	0	0	0	0	0	0
University of Vermont & St Agric Colleg	116	0	27	52	0	0	23	14
Middle Atlantic	18,284	1,294	2,715	6,248	1,439	2,949	1,219	2,420
New Jersey	3,702	278	831	1,236	263	652	256	186
Drew University	0	0	0	0	0	0	0	0
Fairleigh Dickinson University	125	0	0	99	10	15	0	1
Kean College of New Jersey	0	0	0	0	0	0	0	0
Monmouth College(NJ)	97	0	0	97	0	0	0	0
Montclair State College	0	0	0	0	0	0	0	0
New Jersey Institute of Technology	1,598	65	558	450	213	233	0	79

Continued on next page.

Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989 -Continued

Division, State, and institution	Total, engineering	Chemical	Civil	Electrical	Industrial	Mechanical	Metallurgical/ materials	All other engineering
New Jersey, continued								
Princeton University	359	58	106	118	0	77	0	0
Rutgers the State University	822	83	70	260	40	93	170	106
Seton Hall University	0	0	0	0	0	0	0	0
Stevens Institute of Technology	701	72	97	212	0	234	86	0
Trenton State College	0	0	0	0	0	0	0	0
Univ of Med and Dent of New Jersey	0	0	0	0	0	0	0	0
William Paterson College	0	0	0	0	0	0	0	0
New York	8,808	518	1,307	3,545	490	1,314	511	1,123
Adelphi University	0	0	0	0	0	0	0	0
Albany Medical Center Graduate School	0	0	0	0	0	0	0	0
Alfred University	118	0	0	0	25	0	93	0
CUNY Bernard Baruch College	0	0	0	0	0	0	0	0
CUNY Brooklyn College	0	0	0	0	0	0	0	0
CUNY City College	332	15	104	150	0	63	0	0
CUNY College of Staten Island St George	0	0	0	0	0	0	0	0
CUNY Graduate School and Univ Center	157	0	0	0	0	0	0	157
CUNY Herbert H. Lehman College	0	0	0	0	0	0	0	0
CUNY Hunter College	0	0	0	0	0	0	0	0
CUNY John Jay College of Crim Justice	0	0	0	0	0	0	0	0
CUNY Mt. Sinai Sch of Medicine	0	0	0	0	0	0	0	0
CUNY Queens College	0	0	0	0	0	0	0	0
Clarkson University	209	56	44	60	0	49	0	0
College of New Rochelle	0	0	0	0	0	0	0	0
College of St Rose	0	0	0	0	0	0	0	0
Columbia University Main Division	807	86	80	330	80	83	0	148
Columbia University Teachers College	0	0	0	0	0	0	0	0
Cooper Union	51	0	0	0	0	0	0	51
Cornell University	948	62	203	241	0	130	103	209
Fordham University	0	0	0	0	0	0	0	0
Hofstra University	0	0	0	0	0	0	0	0
Iona College	0	0	0	0	0	0	0	0
Ithaca College	0	0	0	0	0	0	0	0
Long Island University	60	0	0	0	60	0	0	0
Manhattan College	350	24	113	158	0	55	0	0
Marist College	0	0	0	0	0	0	0	0
New School for Social Research	0	0	0	0	0	0	0	0
New York Institute of Technology	80	0	0	0	80	0	0	0
New York Medical College	0	0	0	0	0	0	0	0
New York University	0	0	0	0	0	0	0	0
Niagara University	0	0	0	0	0	0	0	0
Pace University	0	0	0	0	0	0	0	0
Polytechnic University	1,230	43	170	779	28	123	59	28
Pratt Institute	21	0	0	21	0	0	0	0
Rensselaer Polytechnic Institute	1,198	61	89	384	89	310	176	89
Rochester Institute of Technology	233	0	0	118	21	23	36	35
Rockefeller University	0	0	0	0	0	0	0	0
Russell Sage College	0	0	0	0	0	0	0	0
SUNY - Albany	0	0	0	0	0	0	0	0
SUNY - Binghamton	406	0	0	0	0	0	0	406
SUNY - Buffalo	932	66	344	203	107	212	0	0
SUNY - Coll of Env Science and Forestry	89	0	89	0	0	0	0	0
SUNY - Health Sci Ctr at Brooklyn	0	0	0	0	0	0	0	0
SUNY - Health Sci Ctr at Syracuse	0	0	0	0	0	0	0	0
SUNY - Stony Brook	268	0	0	141	0	83	44	0
SUNY College at Brockport	0	0	0	0	0	0	0	0
SUNY College at Buffalo	0	0	0	0	0	0	0	0
SUNY College at Cortland	0	0	0	0	0	0	0	0
SUNY College at Fredonia	0	0	0	0	0	0	0	0
SUNY College at Geneseo	0	0	0	0	0	0	0	0
SUNY College at New Paltz	0	0	0	0	0	0	0	0
SUNY College at Oneonta	0	0	0	0	0	0	0	0

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Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989 -Continued

Division, State, and institution	Total, engi-neering	Chemical	Civil	Elec-trical	Indus-trial	Mechan-ical	Metallur-gical/materials	All other engi-neering
New York, continued								
SUNY College at Oswego	0	0	0	0	0	0	0	0
SUNY College at Plattsburgh	0	0	0	0	0	0	0	0
SUNY College at Potsdam	0	0	0	0	0	0	0	0
SUNY College of Technology at Utica/Rom	0	0	0	0	0	0	0	0
SUNY State College of Optometry	0	0	0	0	0	0	0	0
Sarah Lawrence College	0	0	0	0	0	0	0	0
St Bonaventure University	0	0	0	0	0	0	0	0
St John's University	0	0	0	0	0	0	0	0
Syracuse University	1,067	47	71	862	0	87	0	0
Union College(NY)	47	0	0	15	0	32	0	0
University of Rochester	205	58	0	83	0	64	0	0
Vassar College	0	0	0	0	0	0	0	0
Wagner College	0	0	0	0	0	0	0	0
Yeshiva University	0	0	0	0	0	0	0	0
Pennsylvania	5,774	498	577	1,467	686	983	452	1,111
Bloomsburg University of Pennsylvania	0	0	0	0	0	0	0	0
Bryn Mawr College	0	0	0	0	0	0	0	0
Bucknell University	36	7	11	10	0	8	0	0
California University of Pennsylvania	0	0	0	0	0	0	0	0
Carnegie-Mellon University	601	90	64	235	0	88	64	60
Clarion University of Pennsylvania	0	0	0	0	0	0	0	0
Drexel University	825	31	95	303	94	160	58	84
Duquesne University	0	0	0	0	0	0	0	0
East Stroudsburg Univ of Pennsylvania	0	0	0	0	0	0	0	0
Edinboro University of Pennsylvania	0	0	0	0	0	0	0	0
Gannon University	17	0	0	0	0	0	0	17
Hahnemann University	0	0	0	0	0	0	0	0
Indiana University of Pennsylvania	0	0	0	0	0	0	0	0
Kutztown University of Pennsylvania	0	0	0	0	0	0	0	0
Lehigh University	489	106	87	0	107	99	90	0
Mansfield University of Pennsylvania	0	0	0	0	0	0	0	0
Marywood College	0	0	0	0	0	0	0	0
Millersville University of Pennsylvania	18	0	0	0	18	0	0	0
Pennsylvania State University	1,762	97	110	279	129	329	113	705
Phila College of Osteopathic Medicine	0	0	0	0	0	0	0	0
Philadelphia Coll of Pharmacy and Sci	0	0	0	0	0	0	0	0
Shippensburg University of Pennsylvania	0	0	0	0	0	0	0	0
Slippery Rock University of Pennsylvani	0	0	0	0	0	0	0	0
St Joseph's University	0	0	0	0	0	0	0	0
Swarthmore College	0	0	0	0	0	0	0	0
Temple University	62	0	0	9	53	0	0	0
The Medical College of Pennsylvania	0	0	0	0	0	0	0	0
Thomas Jefferson University	0	0	0	0	0	0	0	0
University of Pennsylvania	600	58	6	97	115	58	58	208
University of Pittsburgh	788	66	116	224	132	144	69	37
University of Scranton	0	0	0	0	0	0	0	0
Villanova University	379	33	80	209	0	57	0	0
West Chester University of Pennsylvania	0	0	0	0	0	0	0	0
Widener University	178	10	8	82	38	40	0	0
Wilkes University	19	0	0	19	0	0	0	0
East North Central	18,376	1,129	2,199	5,110	1,875	3,192	1,035	3,836
Illinois	3,971	244	758	1,389	80	753	322	425
Bradley University	112	0	10	47	25	30	0	0
Chicago Coll of Osteo Medicine	0	0	0	0	0	0	0	0
Chicago School of Prof Psych	0	0	0	0	0	0	0	0
Chicago State University	0	0	0	0	0	0	0	0
De Paul University	0	0	0	0	0	0	0	0
Eastern Illinois University	0	0	0	0	0	0	0	0
Forest Institute of Prof Psych	0	0	0	0	0	0	0	0
Governors State University	0	0	0	0	0	0	0	0
Illinois Institute of Technology	661	66	154	252	0	137	52	0
Illinois State University	0	0	0	0	0	0	0	0
Loyola University of Chicago	0	0	0	0	0	0	0	0

Continued on next page.

Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989 -Continued

Division, State, and institution	Total, engineering	Chemical	Civil	Electrical	Industrial	Mechanical	Metallurgical/ materials	All other engineering
Illinois, continued								
Northeastern Illinois University	0	0	0	0	0	0	0	0
Northern Illinois University	51	0	0	23	16	12	0	0
Northwestern University	615	60	98	122	39	75	129	92
Roosevelt University	0	0	0	0	0	0	0	0
Rush University	0	0	0	0	0	0	0	0
Sangamon State University	0	0	0	0	0	0	0	0
Southern Illinois Univ at Carbondale	225	0	30	77	0	43	0	75
Southern Illinois Univ at Edwardsville	85	0	24	61	0	0	0	0
University of Chicago	0	0	0	0	0	0	0	0
University of Health Sciences (Chicago)	0	0	0	0	0	0	0	0
University of Illinois at Chicago	867	55	199	369	0	206	0	38
University of Illinois at Urbana	1,355	63	243	438	0	250	141	220
Western Illinois University	0	0	0	0	0	0	0	0
Indiana	1,983	177	255	720	144	307	59	321
Ball State University	0	0	0	0	0	0	0	0
Butler University	0	0	0	0	0	0	0	0
Indiana State University	23	0	0	23	0	0	0	0
Indiana University	23	0	0	0	0	0	0	23
Indiana Wesleyan University	0	0	0	0	0	0	0	0
Purdue University	1,622	134	228	570	138	260	42	250
Rose-Hulman Institute of Technology	102	4	2	51	0	45	0	0
Saint Francis College	0	0	0	0	0	0	0	0
University of Evansville	11	0	0	3	6	2	0	0
University of Notre Dame	202	39	25	73	0	0	17	48
Valparaiso University	0	0	0	0	0	0	0	0
Michigan	4,833	173	325	1,028	502	783	184	1,838
Andrews University	0	0	0	0	0	0	0	0
Central Michigan University	0	0	0	0	0	0	0	0
Eastern Michigan University	207	0	0	0	207	0	0	0
Grand Valley State University	0	0	0	0	0	0	0	0
Michigan State University	502	41	92	152	0	78	77	62
Michigan Technological University	263	14	30	58	0	97	39	25
Northern Michigan University	0	0	0	0	0	0	0	0
Oakland University	329	0	0	0	0	0	0	329
University of Detroit	143	27	13	26	40	37	0	0
University of Michigan	2,272	77	190	774	193	533	68	437
Wayne State University	985	0	0	0	0	0	0	985
Western Michigan University	132	14	0	18	62	38	0	0
Ohio	5,415	408	555	1,459	753	1,078	334	828
Air Force Institute of Technology	450	0	0	172	53	0	0	225
Antioch University	63	0	0	0	63	0	0	0
Bowling Green State University	0	0	0	0	0	0	0	0
Case Western Reserve University	703	48	32	215	62	126	121	99
Cleveland State University	325	23	42	114	79	67	0	0
John Carroll University	0	0	0	0	0	0	0	0
Kent State University	0	0	0	0	0	0	0	0
Medical College of Ohio at Toledo	0	0	0	0	0	0	0	0
Miami University	14	14	0	0	0	0	0	0
NE Ohio Univ Med School	0	0	0	0	0	0	0	0
Ohio State University	1,154	60	152	325	93	259	95	170
Ohio University	241	24	18	78	66	55	0	0
Union Institute	0	0	0	0	0	0	0	0
University of Akron	470	132	58	86	0	158	0	36
University of Cincinnati	870	53	189	163	0	206	59	200
University of Dayton	588	13	6	164	153	103	51	98
University of Toledo	266	41	46	68	22	89	0	0
Wright State University	214	0	0	52	162	0	0	0
Xavier University	0	0	0	0	0	0	0	0
Youngstown State University	57	0	12	22	0	15	8	0
Wisconsin	2,174	127	306	514	396	271	136	424
Marquette University	369	0	51	197	0	79	0	42
Medical College of Wisconsin	0	0	0	0	0	0	0	0
Milwaukee School of Engineering	266	0	0	0	199	0	0	67
University of Wisconsin - Eau Claire	0	0	0	0	0	0	0	0

Continued on next page.

Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989
-Continued

Division, State, and institution	Total, engi-neering	Chemical	Civil	Elec-trical	Indus-trial	Mechan-ical	Metallur-gical/materials	All other engi-neering
Wisconsin, continued								
University of Wisconsin - Green Bay	0	0	0	0	0	0	0	0
University of Wisconsin - La Crosse	0	0	0	0	0	0	0	0
University of Wisconsin - Madison	1,095	127	110	317	135	192	136	78
University of Wisconsin - Milwaukee	382	0	145	0	0	0	0	237
University of Wisconsin - Oshkosh	0	0	0	0	0	0	0	0
University of Wisconsin - Platteville	12	0	0	0	12	0	0	0
University of Wisconsin - River Falls	0	0	0	0	0	0	0	0
University of Wisconsin - Stevens Point	0	0	0	0	0	0	0	0
University of Wisconsin - Stout	50	0	0	0	50	0	0	0
University of Wisconsin - Whitewater	0	0	0	0	0	0	0	0
West North Central	6,162	493	1,085	1,560	876	1,174	157	817
Iowa	1,155	77	264	211	152	195	35	221
Drake University	0	0	0	0	0	0	0	0
Iowa State University of Sci & Tech	737	52	172	122	95	85	35	176
Loras College	0	0	0	0	0	0	0	0
Maharishi International University	0	0	0	0	0	0	0	0
Marycrest College	0	0	0	0	0	0	0	0
Univ. of Osteopathic Med & Health Sci	0	0	0	0	0	0	0	0
University of Iowa	418	25	92	89	57	110	0	45
University of Northern Iowa	0	0	0	0	0	0	0	0
Kansas	1,048	40	207	220	236	120	0	225
Emporia State University - Kansas	0	0	0	0	0	0	0	0
Fort Hays State University	0	0	0	0	0	0	0	0
Kansas State University	276	18	24	77	56	44	0	57
Pittsburg State University	55	0	0	0	0	0	0	55
University of Kansas	398	22	183	63	71	36	0	23
Washburn University of Topeka	0	0	0	0	0	0	0	0
Wichita State University	319	0	0	80	109	40	0	90
Minnesota	1,219	215	223	247	0	355	0	179
Bemidji State University	0	0	0	0	0	0	0	0
Mankato State University	0	0	0	0	0	0	0	0
Mayo Graduate School	0	0	0	0	0	0	0	0
Moorhead State University	0	0	0	0	0	0	0	0
St Mary's College of Minnesota	0	0	0	0	0	0	0	0
St. Cloud State University	0	0	0	0	0	0	0	0
University of Minnesota	1,219	215	223	247	0	355	0	179
Missouri	1,975	118	170	740	383	379	78	107
Central Missouri State University	40	0	0	0	40	0	0	0
Kirksville College of Osteopathic Med	0	0	0	0	0	0	0	0
Lincoln University	0	0	0	0	0	0	0	0
Northeast Missouri State University	0	0	0	0	0	0	0	0
Northwest Missouri State University	0	0	0	0	0	0	0	0
Southeast Missouri State University	0	0	0	0	0	0	0	0
Southwest Missouri State University	0	0	0	0	0	0	0	0
St. Louis University	0	0	0	0	0	0	0	0
University of Health Sciences (Kansas C	0	0	0	0	0	0	0	0
University of Missouri - Columbia	493	34	55	208	68	56	0	72
University of Missouri - Kansas City	0	0	0	0	0	0	0	0
University of Missouri - Rolla	921	24	62	335	217	170	78	35
University of Missouri - St Louis	0	0	0	0	0	0	0	0
Washington University	521	60	53	197	58	153	0	0
Nebraska	331	22	86	56	69	66	0	32
Creighton University	0	0	0	0	0	0	0	0
Kearney State College	0	0	0	0	0	0	0	0
University of Nebraska - Lincoln	331	22	86	56	69	66	0	32
University of Nebraska - Omaha	0	0	0	0	0	0	0	0

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Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989 -Continued

Division, State, and institution	Total, engineering	Chemical	Civil	Electrical	Industrial	Mechanical	Metallurgical/ materials	All other engineering
Nebraska, continued								
University of Nebraska Medical Center	0	0	0	0	0	0	0	0
North Dakota	153	12	56	49	12	20	0	4
North Dakota State University	118	0	48	42	12	12	0	4
University of North Dakota	35	12	8	7	0	8	0	0
South Dakota	281	9	79	37	24	39	44	49
South Dakota School of Mines and Tech	188	9	49	21	6	30	44	29
South Dakota State University	93	0	30	16	18	9	0	20
University of South Dakota	0	0	0	0	0	0	0	0
South Atlantic	15,489	696	2,337	4,544	2,694	1,878	421	2,919
Delaware	302	120	48	62	0	72	0	0
Delaware State University	0	0	0	0	0	0	0	0
University of Delaware	302	120	48	62	0	72	0	0
District of Columbia	1,908	0	371	598	786	153	0	0
Catholic University of America	245	0	42	68	0	135	0	0
Gallaudet University	0	0	0	0	0	0	0	0
George Washington University	1,558	0	287	485	786	0	0	0
Georgetown University	0	0	0	0	0	0	0	0
Howard University	105	0	42	45	0	18	0	0
The American University	0	0	0	0	0	0	0	0
University of the District of Columbia	0	0	0	0	0	0	0	0
Florida	3,107	98	451	997	335	323	108	795
Florida A & M University	28	0	20	0	0	0	0	8
Florida Atlantic University	174	0	0	66	0	57	0	51
Florida Institute of Technology	317	14	36	206	0	38	0	23
Florida International University	197	0	54	46	73	24	0	0
Florida State University	72	13	0	42	0	17	0	0
Jacksonville University	0	0	0	0	0	0	0	0
Nova University	0	0	0	0	0	0	0	0
University of Central Florida	435	0	0	0	0	0	0	435
University of Florida	1,005	51	216	255	42	126	108	207
University of Miami	262	0	70	49	57	37	0	49
University of South Florida	617	20	55	333	163	24	0	22
University of West Florida	0	0	0	0	0	0	0	0
Georgia	2,228	118	397	660	440	244	46	323
Augusta College	0	0	0	0	0	0	0	0
Clark Atlanta University	0	0	0	0	0	0	0	0
Emory University	0	0	0	0	0	0	0	0
Fort Valley State University	0	0	0	0	0	0	0	0
Georgia College	0	0	0	0	0	0	0	0
Georgia Institute of Technology	2,062	73	397	624	383	225	46	314
Georgia Southern College	0	0	0	0	0	0	0	0
Georgia State University	0	0	0	0	0	0	0	0
Institute of Paper Science & Technology	45	45	0	0	0	0	0	0
Medical College of Georgia	0	0	0	0	0	0	0	0
Mercer University	112	0	0	36	57	19	0	0
Morehouse School of Medicine	0	0	0	0	0	0	0	0
University of Georgia	9	0	0	0	0	0	0	9
Valdosta State College	0	0	0	0	0	0	0	0
West Georgia College	0	0	0	0	0	0	0	0
Maryland	1,886	102	249	911	75	304	51	194
Coppin State College	0	0	0	0	0	0	0	0
Frostburg State University	0	0	0	0	0	0	0	0
Hood College	0	0	0	0	0	0	0	0
Johns Hopkins University	174	34	20	63	0	32	0	25
Loyola College	276	0	0	276	0	0	0	0
Morgan State University	0	0	0	0	0	0	0	0
Towson State University	0	0	0	0	0	0	0	0
Uniformed Serv Univ of the Hlth Science	0	0	0	0	0	0	0	0
University of Baltimore	0	0	0	0	0	0	0	0
University of Maryland - Balt Prof Sch	0	0	0	0	0	0	0	0
University of Maryland - Baltimore Cnty	143	12	0	32	75	24	0	0
University of Maryland - College Park	1,293	56	229	540	0	248	51	169
University of Maryland Eastern Shore	0	0	0	0	0	0	0	0
Washington College	0	0	0	0	0	0	0	0
North Carolina	1,790	91	198	501	89	267	133	511
Appalachian State University	0	0	0	0	0	0	0	0
Duke University	256	0	45	99	0	54	0	58
East Carolina University	0	0	0	0	0	0	0	0
North Carolina A & T State University	191	0	10	61	26	39	0	55

Continued on next page.

Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989 -Continued

Division, State, and institution	Total, engineering	Chemical	Civil	Electrical	Industrial	Mechanical	Metallurgical/ materials	All other engineering
North Carolina, continued								
North Carolina Central University	0	0	0	0	0	0	0	0
North Carolina State Univ at Raleigh	1,215	91	143	341	63	174	133	270
Univ of North Carolina at Chapel Hill	44	0	0	0	0	0	0	44
Univ of North Carolina at Charlotte	84	0	0	0	0	0	0	84
Univ of North Carolina at Greensboro	0	0	0	0	0	0	0	0
University of North Carolina/Wilmington	0	0	0	0	0	0	0	0
Wake Forest University	0	0	0	0	0	0	0	0
Western Carolina University	0	0	0	0	0	0	0	0
South Carolina	1,013	28	234	149	41	100	32	429
Clemson University	641	28	234	149	41	100	32	57
College of Charleston	0	0	0	0	0	0	0	0
Furman University	0	0	0	0	0	0	0	0
Medical University of South Carolina	0	0	0	0	0	0	0	0
University of South Carolina	372	0	0	0	0	0	0	372
Winthrop College	0	0	0	0	0	0	0	0
Virginia	2,826	93	313	611	815	340	51	603
College of William and Mary	0	0	0	0	0	0	0	0
Eastern Virginia Medical School	0	0	0	0	0	0	0	0
George Mason University	273	0	0	155	99	0	0	19
Hampton University	0	0	0	0	0	0	0	0
Hollins College	0	0	0	0	0	0	0	0
Institute of Textile Technology	30	0	0	0	0	0	0	30
James Madison University	0	0	0	0	0	0	0	0
Old Dominion University	337	0	42	64	119	112	0	0
Radford University	0	0	0	0	0	0	0	0
University of Richmond	0	0	0	0	0	0	0	0
University of Virginia	488	51	40	123	55	79	51	89
Virginia Commonwealth University	23	0	0	0	0	0	0	23
Virginia Polytechnic Inst and State Uni	1,675	42	231	269	542	149	0	442
Virginia State University	0	0	0	0	0	0	0	0
West Virginia	429	46	76	55	113	75	0	64
Marshall University	0	0	0	0	0	0	0	0
Univ of West Virginia Coll of Grad Stds	91	24	19	0	48	0	0	0
University of Charleston	0	0	0	0	0	0	0	0
West Virginia Institute of Technology	18	0	0	0	0	0	0	18
West Virginia Sch of Osteopathic Med	0	0	0	0	0	0	0	0
West Virginia University	320	22	57	55	65	75	0	46
East South Central	4,248	304	468	1,194	817	706	223	536
Alabama	1,428	79	87	463	222	322	135	120
Alabama A & M University	0	0	0	0	0	0	0	0
Alabama State University	0	0	0	0	0	0	0	0
Auburn University	469	59	41	97	72	79	75	46
Jacksonville State University	0	0	0	0	0	0	0	0
The University of Alabama	234	8	31	48	50	50	34	13
The University of Alabama at Birmingham	153	0	15	32	0	19	26	61
The University of Alabama in Huntsville	483	0	0	238	100	145	0	0
Troy State University at Montgomery	0	0	0	0	0	0	0	0
Tuskegee University	38	0	0	23	0	15	0	0
University of Montevallo	0	0	0	0	0	0	0	0
University of South Alabama	51	12	0	25	0	14	0	0
Kentucky	928	78	108	233	264	166	23	56
Eastern Kentucky University	90	0	0	0	90	0	0	0
Morehead State University	0	0	0	0	0	0	0	0
Murray State University	56	0	0	0	56	0	0	0
Spalding University	0	0	0	0	0	0	0	0
University of Kentucky	315	31	69	70	0	66	23	56
University of Louisville	467	47	39	163	118	100	0	0
Western Kentucky University	0	0	0	0	0	0	0	0
Mississippi	354	34	31	143	28	68	0	50
Jackson State University	0	0	0	0	0	0	0	0
Mississippi State University	268	26	14	107	28	43	0	50
Mississippi University for Women	0	0	0	0	0	0	0	0
University of Mississippi	86	8	17	36	0	25	0	0
University of Southern Mississippi	0	0	0	0	0	0	0	0
Tennessee	1,538	113	242	355	303	150	65	310
Austin Peay State University	0	0	0	0	0	0	0	0
East Tennessee State University	0	0	0	0	0	0	0	0
Fisk University	0	0	0	0	0	0	0	0

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Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989 -Continued

Division, State, and institution	Total, engineering	Chemical	Civil	Electrical	Industrial	Mechanical	Metallurgical/ materials	All other engineering
Tennessee, continued								
Meharry Medical College	0	0	0	0	0	0	0	0
Memphis State University	157	0	49	66	0	24	0	18
Middle Tennessee State University	0	0	0	0	0	0	0	0
Tennessee State University	52	0	0	0	0	0	0	52
Tennessee Technological University	153	12	9	34	11	47	0	40
University of Tennessee at Chattanooga	54	0	0	0	0	0	0	54
University of Tennessee at Knoxville	881	84	138	167	292	47	32	121
University of Tennessee, Memphis	0	0	0	0	0	0	0	0
Vanderbilt University	241	17	46	88	0	32	33	25
West South Central	9,379	703	1,589	2,818	1,070	1,404	115	1,680
Arkansas	336	32	34	106	109	13	0	42
Arkansas State University	0	0	0	0	0	0	0	0
University of Arkansas	336	32	34	106	109	13	0	42
University of Arkansas - Med Sci Campus	0	0	0	0	0	0	0	0
University of Arkansas at Little Rock	0	0	0	0	0	0	0	0
University of Central Arkansas	0	0	0	0	0	0	0	0
Louisiana	944	86	143	163	76	112	0	364
Grambling State University	0	0	0	0	0	0	0	0
Louisiana State University System	564	63	119	155	47	84	0	96
Louisiana Tech University	199	0	0	0	0	0	0	199
Loyola University in New Orleans	0	0	0	0	0	0	0	0
McNeese State University	35	0	0	0	0	0	0	35
Nicholls State University	0	0	0	0	0	0	0	0
Northeast Louisiana University	0	0	0	0	0	0	0	0
Northwestern State Univ of Louisiana	0	0	0	0	0	0	0	0
Southeastern Louisiana University	0	0	0	0	0	0	0	0
Southern University A & M College	0	0	0	0	0	0	0	0
Tulane University of Louisiana	46	9	11	8	0	13	0	5
University of Southwestern Louisiana	100	14	13	0	29	15	0	29
Xavier University	0	0	0	0	0	0	0	0
Oklahoma	1,379	111	339	330	212	144	0	243
East Central University	0	0	0	0	0	0	0	0
Oklahoma State University	551	44	125	110	101	129	0	42
Oral Roberts University	0	0	0	0	0	0	0	0
Southwestern Oklahoma State University	0	0	0	0	0	0	0	0
University of Oklahoma	726	52	214	203	105	0	0	152
University of Tulsa	102	15	0	17	6	15	0	49
Texas	6,720	474	1,073	2,219	673	1,135	115	1,031
Abilene Christian University	0	0	0	0	0	0	0	0
Angelo State University	0	0	0	0	0	0	0	0
Baylor College of Dentistry	0	0	0	0	0	0	0	0
Baylor College of Medicine	0	0	0	0	0	0	0	0
Baylor University	0	0	0	0	0	0	0	0
Corpus Christi State University	0	0	0	0	0	0	0	0
East Texas State University	0	0	0	0	0	0	0	0
Incarnate Word College	0	0	0	0	0	0	0	0
Lamar University	154	27	43	18	26	40	0	0
Midwestern State University	0	0	0	0	0	0	0	0
Pan American University	0	0	0	0	0	0	0	0
Prairie View A & M University	11	0	0	0	0	0	0	11
Rice University	256	61	30	107	0	58	0	0
Sam Houston State University	0	0	0	0	0	0	0	0
Southern Methodist University	481	0	0	400	0	81	0	0
Southwest Texas State University	0	0	0	0	0	0	0	0
St Mary's University of San Antonio	42	0	0	0	0	0	0	42
Stephen F. Austin State University	0	0	0	0	0	0	0	0
Sul Ross State University	0	0	0	0	0	0	0	0
Tarleton State University	0	0	0	0	0	0	0	0
Texas A & I University	69	13	6	17	0	27	0	6
Texas A & M University	1,454	115	271	271	249	191	0	357
Texas Christian University	0	0	0	0	0	0	0	0
Texas College of Osteopathic Medicine	0	0	0	0	0	0	0	0
Texas Southern University	0	0	0	0	0	0	0	0
Texas Tech University	266	13	47	57	83	51	0	15
Texas Woman's University	0	0	0	0	0	0	0	0

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Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989 -Continued

Division, State, and institution	Total, engineering	Chemical	Civil	Electrical	Industrial	Mechanical	Metallurgical/ materials	All other engineering
Texas, continued								
Trinity University	0	0	0	0	0	0	0	0
Univ of Texas Hlth Sci Ctr San Antonio	0	0	0	0	0	0	0	0
Univ of Texas Hlth Sci Ctr at Houston	0	0	0	0	0	0	0	0
Univ of Texas MD Anderson Cancer Center	0	0	0	0	0	0	0	0
Univ of Texas Med Branch at Galveston	0	0	0	0	0	0	0	0
Univ of Texas SW Medical Ctr at Dallas	18	0	0	0	0	0	0	18
Univ of Texas at Arlington	922	0	87	420	74	190	26	125
Univ of Texas at Austin	1,769	141	392	490	0	334	71	341
Univ of Texas at Dallas	156	0	0	131	0	0	0	25
Univ of Texas at El Paso	221	0	42	69	68	24	18	0
University of Central Texas	0	0	0	0	0	0	0	0
University of Houston - Victoria	0	0	0	0	0	0	0	0
University of Houston at Clear Lake Cit	77	0	41	16	20	0	0	0
University of Houston-University Park	785	104	114	223	131	139	0	74
University of North Texas	22	0	0	0	22	0	0	0
University of Texas at San Antonio	0	0	0	0	0	0	0	0
University of Texas at Tyler	0	0	0	0	0	0	0	0
University of Texas of the Permian Basi	2	0	0	0	0	0	0	2
West Texas State University	15	0	0	0	0	0	0	15
Mountain	6,206	423	1,253	2,177	276	737	368	972
Arizona	1,976	119	281	767	230	217	58	304
Arizona State University	1,150	82	196	447	146	203	0	76
Northern Arizona University	0	0	0	0	0	0	0	0
University of Arizona	826	37	85	320	84	14	58	228
Colorado	1,710	94	448	602	23	158	88	297
Colorado School of Mines	205	32	0	0	0	14	88	71
Colorado State University	413	15	195	63	23	72	0	45
University of Colorado	1,092	47	253	539	0	72	0	181
University of Denver	0	0	0	0	0	0	0	0
University of Northern Colorado	0	0	0	0	0	0	0	0
Idaho	333	38	52	93	0	61	31	58
Idaho State University	36	0	0	0	0	0	0	36
University of Idaho	297	38	52	93	0	61	31	22
Montana	167	12	42	21	18	14	10	50
Montana College Mineral Sci & Technolog	73	0	13	0	0	0	10	50
Montana State University	94	12	29	21	18	14	0	0
University of Montana	0	0	0	0	0	0	0	0
Nevada	182	0	56	77	0	23	21	5
University of Nevada at Las Vegas	70	0	35	35	0	0	0	0
University of Nevada at Reno	112	0	21	42	0	23	21	5
New Mexico	756	83	128	368	0	121	26	30
Eastern New Mexico University	0	0	0	0	0	0	0	0
New Mexico Highlands University	0	0	0	0	0	0	0	0
New Mexico Institute of Mining and Tech	56	0	0	0	0	0	26	30
New Mexico State University	250	23	47	137	0	43	0	0
University of New Mexico	450	60	81	231	0	78	0	0
Utah	957	66	221	210	5	120	134	201
Brigham Young University	154	27	32	34	5	47	0	9
University of Utah	444	39	26	101	0	47	134	97
Utah State University	359	0	163	75	0	26	0	95
Wyoming	125	11	25	39	0	23	0	27
University of Wyoming	125	11	25	39	0	23	0	27
Pacific	17,846	666	2,449	6,742	1,885	2,555	659	2,890
Alaska	157	0	45	10	56	9	0	37
University of Alaska Southeast	0	0	0	0	0	0	0	0
University of Alaska at Anchorage	63	0	24	0	39	0	0	0
University of Alaska at Fairbanks	94	0	21	10	17	9	0	37
California	15,349	504	1,990	5,970	1,731	2,227	562	2,365
Azusa Pacific University	0	0	0	0	0	0	0	0
Biola University	0	0	0	0	0	0	0	0
Calif Poly State Univ at San Luis Obisp	107	0	38	35	5	0	2	27
Calif Sch of Prof Psych - Fresno	0	0	0	0	0	0	0	0

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Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989 -Continued

Division, State, and institution	Total, engineering	Chemical	Civil	Electrical	Industrial	Mechanical	Metallurgical/ materials	All other engineering
California, continued								
Calif Sch of Prof Psych - Los Angeles	0	0	0	0	0	0	0	0
Calif Sch of Prof Psych - San Diego	0	0	0	0	0	0	0	0
Calif Sch of Prof Psych-Berkeley/Alamed	0	0	0	0	0	0	0	0
Calif State Polytechnic Univ at Pomona	197	0	43	0	0	0	0	154
Calif State Univ at Dominguez Hills	0	0	0	0	0	0	0	0
Calif State Univ at Fullerton	262	0	27	177	0	57	0	1
Calif State Univ at Hayward	0	0	0	0	0	0	0	0
Calif State Univ at Long Beach	747	0	150	271	0	189	0	137
Calif State Univ at Los Angeles	154	0	29	97	0	28	0	0
Calif State Univ at San Bernardino	0	0	0	0	0	0	0	0
Calif State Univ of Stanislaus	0	0	0	0	0	0	0	0
Calif State University at Chico	10	0	0	10	0	0	0	0
Calif State University at Fresno	12	0	12	0	0	0	0	0
Calif State University at Northridge	506	0	23	228	65	91	8	91
Calif State University at Sacramento	213	0	52	76	0	36	0	49
California Institute of Integral Studie	0	0	0	0	0	0	0	0
California Institute of Technology	430	58	35	123	0	65	14	135
California State Univ - Bakersfield	0	0	0	0	0	0	0	0
Chapman College	0	0	0	0	0	0	0	0
Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0	0	0	0
Claremont Univ Center & Graduate School	0	0	0	0	0	0	0	0
Dominican College of San Rafael	0	0	0	0	0	0	0	0
Fuller Theological Seminary	0	0	0	0	0	0	0	0
Golden Gate University	0	0	0	0	0	0	0	0
Harvey Mudd College	6	0	0	0	0	0	0	6
Humboldt State University	14	0	14	0	0	0	0	0
John F Kennedy University	0	0	0	0	0	0	0	0
Loma Linda University	0	0	0	0	0	0	0	0
Loyola Marymount University	62	0	16	29	0	17	0	0
National University	50	0	0	50	0	0	0	0
Northrop University	129	0	11	56	0	29	0	33
Occidental College	0	0	0	0	0	0	0	0
Pacific Grad School of Prof Psych	0	0	0	0	0	0	0	0
Pacific States University	20	0	0	20	0	0	0	0
Pepperdine University	0	0	0	0	0	0	0	0
Rand Graduate Institute Policy Studies	0	0	0	0	0	0	0	0
San Diego State University	346	0	26	195	0	89	0	36
San Francisco State University	0	0	0	0	0	0	0	0
San Jose State University	676	17	92	312	52	92	36	75
Santa Clara University	1,007	0	8	626	161	98	0	114
Sonoma State University	0	0	0	0	0	0	0	0
Stanford University	2,173	63	229	672	106	436	156	511
The Fielding Institute	0	0	0	0	0	0	0	0
The Wright Institute	0	0	0	0	0	0	0	0
US International University	0	0	0	0	0	0	0	0
US Naval Postgraduate School	579	0	0	203	112	108	0	156
University of Calif at Berkeley	1,639	153	535	361	78	280	142	90
University of Calif at Davis	589	30	123	149	0	163	0	124
University of Calif at Irvine	299	0	0	0	0	0	0	299
University of Calif at Los Angeles	978	54	295	318	0	213	98	0
University of Calif at Riverside	0	0	0	0	0	0	0	0
University of Calif at San Diego	303	15	0	163	22	42	0	61
University of Calif at San Francisco	30	0	0	0	0	0	0	30
University of Calif at Santa Barbara	418	58	0	217	0	94	49	0
University of Calif at Santa Cruz	28	0	0	28	0	0	0	0
University of La Verne	0	0	0	0	0	0	0	0
University of Redlands	0	0	0	0	0	0	0	0
University of San Diego	0	0	0	0	0	0	0	0
University of San Francisco	68	0	68	0	0	0	0	0
University of Southern California	3,195	56	164	1,512	1,114	80	57	212

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Table E-3. Graduate engineering enrollment in all institutions by geographic division, State, institution, and major field of engineering: 1989 -Continued

Division, State, and institution	Total, engineering	Chemical	Civil	Electrical	Industrial	Mechanical	Metallurgical/ materials	All other engineering
California, continued								
University of the Pacific	8	0	0	8	0	0	0	0
West Coast University	94	0	0	34	16	20	0	24
Hawaii	190	0	22	86	0	32	0	50
University of Hawaii at Manoa	190	0	22	86	0	32	0	50
Oregon	759	68	105	214	75	106	23	168
Oregon Grad Inst of Science & Technolog	48	0	0	0	0	0	20	28
Oregon Health Sciences University	0	0	0	0	0	0	0	0
Oregon State University	475	68	82	125	31	95	3	71
Pacific University	0	0	0	0	0	0	0	0
Portland State University	221	0	23	89	44	11	0	54
Southern Oregon State College	0	0	0	0	0	0	0	0
University of Oregon	0	0	0	0	0	0	0	0
University of Portland	15	0	0	0	0	0	0	15
Washington	1,391	94	287	462	23	181	74	270
Central Washington University	0	0	0	0	0	0	0	0
Eastern Washington University	0	0	0	0	0	0	0	0
Gonzaga University	15	0	0	12	0	3	0	0
Pacific Lutheran University	0	0	0	0	0	0	0	0
Saint Martin's College	23	0	0	0	23	0	0	0
Seattle University	119	0	0	119	0	0	0	0
University of Washington	995	70	229	252	0	136	60	248
Walla Walla College	0	0	0	0	0	0	0	0
Washington State University	239	24	58	79	0	42	14	22
Western Washington University	0	0	0	0	0	0	0	0
Whitworth College	0	0	0	0	0	0	0	0
Outlying Areas	108	12	21	37	25	13	0	0
Guam	0	0	0	0	0	0	0	0
University of Guam	0	0	0	0	0	0	0	0
Puerto Rico	108	12	21	37	25	13	0	0
Catholic University of Puerto Rico	0	0	0	0	0	0	0	0
Center for Adv Studies on PR & Caribbea	0	0	0	0	0	0	0	0
Ponce School of Medicine	0	0	0	0	0	0	0	0
University of Puerto Rico	108	12	21	37	25	13	0	0
University of Puerto Rico - Rio Piedras	0	0	0	0	0	0	0	0
University of Puerto Rico Med Sci Campu	0	0	0	0	0	0	0	0

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-4. Graduate science/engineering enrollment by enrollment status and total postdoctorates in doctorate-granting institutions, ranked by total graduate science/engineering enrollment: 1989

Institutional ranking	Total students	Full-time students	Part-time students	Postdoctorates
Total, all institutions	385,025	267,554	117,471	28,157
1 University of Southern California	6,375	3,426	2,949	283
2 University of Minnesota	5,607	4,697	910	333
3 University of Wisconsin - Madison	5,571	4,916	655	441
4 Ohio State University	5,164	4,435	729	284
5 University of Michigan	5,083	4,533	550	442
6 University of Calif at Berkeley	5,057	5,057	0	723
7 University of Illinois at Urbana	4,792	4,684	108	219
8 Texas A & M University	4,635	3,928	707	201
9 University of Calif at Los Angeles	4,442	4,345	97	626
10 Univ of Texas at Austin	4,436	3,847	589	252
Total, 1st 10 insts.	51,162	43,868	7,294	3,804
11 Pennsylvania State University	4,348	3,141	1,207	159
12 George Washington University	4,242	1,417	2,825	29
13 University of Washington	4,179	3,278	901	592
14 Stanford University	4,177	3,828	349	789
15 Rutgers the State University	4,093	2,025	2,068	185
16 Purdue University	4,040	3,686	354	196
17 Massachusetts Institute of Technology	4,032	3,913	119	451
18 University of Colorado	3,864	2,838	1,026	280
19 University of Maryland - College Park	3,860	2,309	1,551	164
20 Cornell University	3,636	3,636	0	403
Total, 1st 20 insts.	91,633	73,939	17,694	7,052
21 University of Pittsburgh	3,635	2,010	1,625	191
22 University of Arizona	3,474	2,867	607	251
23 Indiana University	3,473	2,440	1,033	195
24 University of Florida	3,371	2,291	1,080	299
25 Virginia Polytechnic Inst and State Uni	3,242	2,413	829	65
26 University of Massachusetts	3,130	1,566	1,564	187
27 SUNY - Buffalo	3,126	2,017	1,109	284
28 North Carolina State Univ at Raleigh	3,114	2,484	630	168
29 Harvard University	3,071	2,938	133	1,974
30 Michigan State University	3,051	2,555	496	196
Total, 1st 30 insts.	124,320	97,520	26,800	10,862
31 University of Illinois at Chicago	3,044	1,875	1,169	145
32 Wayne State University	2,979	1,581	1,398	200
33 Univ of North Carolina at Chapel Hill	2,963	2,514	449	392
34 Arizona State University	2,961	1,887	1,074	75
35 Columbia University Main Division	2,946	2,289	657	480
36 New York University	2,922	1,467	1,455	169
37 Georgia Institute of Technology	2,766	2,100	666	51
38 University of Tennessee at Knoxville	2,738	1,667	1,071	147
39 Iowa State University of Sci & Tech	2,680	2,225	455	77
40 University of Calif at Davis	2,668	2,530	138	238
Total, 1st 40 insts.	152,987	117,655	35,332	12,836
41 New Jersey Institute of Technology	2,647	1,296	1,351	0
42 University of Pennsylvania	2,521	2,298	223	552
43 University of Cincinnati	2,422	1,651	771	129
44 SUNY - Stony Brook	2,396	1,646	750	197
45 Syracuse University	2,383	1,235	1,148	43
46 University of Connecticut	2,348	1,692	656	121
47 Louisiana State University System	2,340	1,913	427	208
48 University of Oklahoma	2,270	1,421	849	87
49 Northeastern University	2,241	1,028	1,213	38
50 Boston University	2,229	1,584	645	32
Total, 1st 50 insts.	176,784	133,419	43,365	14,243
51 University of Kansas	2,191	990	1,201	149
52 University of Iowa	2,140	1,785	355	283
53 San Diego State University	2,100	961	1,139	34
54 Texas Woman's University	2,098	727	1,371	1
55 University of Houston-University Park	2,088	1,202	886	99
56 CUNY Graduate School and Univ Center	2,055	1,816	239	24
57 George Mason University	2,050	486	1,564	0
58 Polytechnic University	2,050	396	1,654	13
59 University of Chicago	1,969	1,969	0	423
60 Northwestern University	1,931	1,838	93	221
Total, 1st 60 insts.	197,456	145,589	51,867	15,490

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Table E-4. Graduate science/engineering enrollment by enrollment status and total postdoctorates in doctorate-granting institutions, ranked by total graduate science/engineering enrollment: 1989
-Continued

Institutional ranking	Total students	Full-time students	Part-time students	Postdoctorates
61 Yale University	1,931	1,771	160	749
62 Univ of Texas at Arlington	1,910	808	1,102	31
63 University of South Carolina	1,892	1,163	729	36
64 Columbia University Teachers College	1,884	671	1,213	0
65 University of Kentucky	1,878	1,442	436	144
66 Colorado State University	1,864	1,397	467	175
67 University of Hawaii at Manoa	1,857	1,539	318	43
68 University of Missouri - Columbia	1,843	1,293	550	104
69 University of Utah	1,817	1,377	440	187
70 University of South Florida	1,817	930	887	41
Total, 1st 70 insts.	216,149	157,980	58,169	17,000
71 Rensselaer Polytechnic Institute	1,795	1,310	485	67
72 Oregon State University	1,761	1,613	148	71
73 Case Western Reserve University	1,758	1,137	621	247
74 University of Wisconsin - Milwaukee	1,709	960	749	27
75 University of Calif at San Diego	1,702	1,590	112	560
76 Johns Hopkins University	1,694	1,487	207	676
77 Oklahoma State University	1,690	707	983	28
78 University of Virginia	1,666	1,556	110	231
79 Carnegie-Mellon University	1,609	1,218	391	112
80 Southern Illinois Univ at Carbondale	1,599	1,218	381	36
Total, 1st 80 insts.	233,132	170,776	62,356	19,055
81 Santa Clara University	1,591	167	1,424	0
82 University of Lowell	1,582	693	889	4
83 Temple University	1,565	1,117	448	100
84 Kansas State University	1,533	1,308	225	58
85 University of Akron	1,526	897	629	47
86 University of New Mexico	1,514	1,002	512	77
87 Illinois Institute of Technology	1,510	518	992	18
88 Virginia Commonwealth University	1,507	957	550	149
89 University of Georgia	1,501	1,314	187	130
90 Auburn University	1,496	1,258	238	44
Total, 1st 90 insts.	248,457	180,007	68,450	19,682
91 The American University	1,476	701	775	2
92 Clemson University	1,458	1,158	300	11
93 University of Nebraska - Lincoln	1,457	1,169	288	55
94 University of Calif at Santa Barbara	1,440	1,408	32	134
95 The University of Alabama at Birmingham	1,438	1,008	430	226
96 Washington University	1,437	1,104	333	400
97 Stevens Institute of Technology	1,435	505	930	2
98 Florida State University	1,425	1,061	364	60
99 De Paul University	1,400	576	824	0
100 West Virginia University	1,396	934	462	60
Total, 1st 100 insts.	262,819	189,631	73,188	20,632
101 University of Rochester	1,376	1,218	158	208
102 Western Michigan University	1,342	616	726	0
103 Princeton University	1,327	1,325	2	251
104 Nova University	1,324	1,060	264	0
105 Duke University	1,299	1,201	98	349
106 University of Rhode Island	1,278	860	418	46
107 Drexel University	1,276	533	743	39
108 Long Island University	1,260	331	929	0
109 Utah State University	1,247	1,085	162	37
110 University of Missouri - Rolla	1,231	589	642	8
Total, 1st 110 insts.	275,779	198,449	77,330	21,570
111 University of North Texas	1,221	898	323	12
112 University of Delaware	1,218	878	340	41
113 Pace University	1,217	114	1,103	0
114 University of Calif at Irvine	1,200	1,124	76	244
115 SUNY - Binghamton	1,199	627	572	12
116 Washington State University	1,191	1,085	106	80
117 University of Louisville	1,186	598	588	30
118 Old Dominion University	1,184	550	634	5
119 US Naval Postgraduate School	1,182	1,182	0	8
120 Univ of Texas at Dallas	1,169	526	643	7
Total, 1st 120 insts.	287,746	206,031	81,715	22,009

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Table E-4. Graduate science/engineering enrollment by enrollment status and total postdoctorates in doctorate-granting institutions ranked by total graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total students	Full-time students	Part-time students	Postdoc-torates
121 Texas Tech University	1,167	1,017	150	39
122 University of Miami	1,157	910	247	103
123 University of Puerto Rico - Rio Piedras	1,116	671	445	5
124 Mississippi State University	1,090	842	248	17
125 SUNY - Albany	1,088	760	328	37
126 Tufts University	1,070	848	222	228
127 Georgia State University	1,068	616	452	20
128 New School for Social Research	1,066	441	625	0
129 California Institute of Technology	1,065	1,065	0	296
130 Cleveland State University	1,060	293	767	15
Total, 1st 130 insts.	298,693	213,494	85,199	22,769
131 University of Central Florida	1,047	469	578	9
132 University of Calif at San Francisco	1,037	1,021	16	909
133 Florida Institute of Technology	1,024	477	547	7
134 Antioch University	1,019	797	222	0
135 Lehigh University	1,018	703	315	43
136 Vanderbilt University	1,001	924	77	226
137 Ohio University	986	843	143	7
138 Worcester Polytechnic Institute	984	370	614	8
139 Northern Illinois University	978	679	299	6
140 New York Institute of Technology	961	396	565	0
Total, 1st 140 insts.	308,748	220,173	88,575	23,984
141 Wright State University	961	411	550	9
142 Kent State University	961	574	387	0
143 University of Idaho	960	505	455	27
144 Southern Methodist University	952	150	802	8
145 Tulane University of Louisiana	947	810	137	24
146 Adelphi University	943	278	665	1
147 University of Arkansas	940	679	261	33
148 The University of Alabama in Huntsville	940	382	558	0
149 University of Maryland - Balt Prof Sch	921	429	492	98
150 Catholic University of America	916	278	638	15
Total, 1st 150 insts.	318,189	224,669	93,520	24,199
151 University of Missouri - Kansas City	908	380	528	14
152 Villanova University	902	195	707	3
153 Georgetown University	886	531	355	57
154 Wichita State University	881	296	585	0
155 Fairleigh Dickinson University	859	185	674	0
156 New Mexico State University	856	598	258	20
157 Emory University	852	650	202	108
158 CUNY Hunter College	844	264	580	3
159 University of Maryland - Baltimore Cnty	835	449	386	16
160 Univ of Texas Hlth Sci Ctr at Houston	832	482	350	0
Total, 1st 160 insts.	326,844	228,699	98,145	24,420
161 Portland State University	815	354	461	0
162 Marquette University	814	470	344	12
163 Northern Arizona University	804	419	385	0
164 St. Louis University	804	370	434	46
165 University of Wyoming	802	630	172	30
166 Rice University	789	739	50	74
167 Brown University	785	749	36	75
168 University of Oregon	776	704	72	85
169 University of Dayton	775	163	612	2
170 The University of Alabama	768	649	119	21
Total, 1st 170 insts.	334,776	233,946	100,830	24,765
171 Memphis State University	767	456	311	9
172 University of Nevada at Reno	762	555	207	39
173 University of Notre Dame	756	717	39	53
174 University of Mississippi	756	575	181	45
175 Florida International University	718	255	463	4
176 CUNY City College	716	258	458	10
177 Brigham Young University	707	397	310	37
178 Univ of Texas at El Paso	701	365	336	3
179 Oakland University	701	200	501	0
180 Colorado School of Mines	679	455	224	0
Total, 1st 180 insts.	342,039	238,179	103,860	24,965

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Table E-4. Graduate science/engineering enrollment by enrollment status and total postdoctorates in doctorate-granting institutions, ranked by total graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total students	Full-time students	Part-time students	Postdoctorates
181 University of Calif at Riverside	672	632	40	118
182 University of Maine at Orono	667	505	162	16
183 University of Toledo	666	462	204	18
184 Yeshiva University	666	538	128	218
185 University of Denver	664	427	237	40
186 University of Southern Mississippi	661	459	202	11
187 Howard University	656	427	229	14
188 University of New Hampshire	634	435	199	0
189 Golden Gate University	618	27	591	0
190 North Dakota State University	618	513	105	15
Total, 1st 190 insts.	348,561	242,604	105,957	25,415
191 University of Vermont & St Agric Colleg	618	461	157	77
192 Boston College	614	412	202	15
193 Loyola University of Chicago	608	397	211	28
194 University of Puerto Rico Med Sci Campu	601	347	254	2
195 Hofstra University	599	328	271	0
196 University of Detroit	588	164	424	0
197 St John's University	569	271	298	3
198 Illinois State University	567	380	187	1
199 Bowling Green State University	563	440	123	25
200 University of Calif at Santa Cruz	555	555	0	27
Total, 1st 200 insts.	354,443	246,359	108,084	25,593
201 Air Force Institute of Technology	548	546	2	0
202 University of Southwestern Louisiana	534	401	133	2
203 Montana State University	515	459	56	30
204 Claremont Univ Center & Graduate School	502	147	355	0
205 Calif Sch of Prof Psych-Berkeley/Alamed	501	431	70	0
206 Calif Sch of Prof Psych - Los Angeles	501	383	118	0
207 US International University	497	209	288	0
208 Florida Atlantic University	490	197	293	0
209 Union Institute	488	488	0	0
210 Rush University	487	270	217	22
Total, 1st 210 insts.	359,506	249,890	109,616	25,647
211 SUNY - Coll of Env Science and Forestry	482	297	185	10
212 Calif Sch of Prof Psych - San Diego	480	349	131	0
213 University of Nebraska - Omaha	473	108	365	0
214 University of Northern Colorado	471	226	245	1
215 Fordham University	470	256	214	2
216 The Fielding Institute	470	470	0	0
217 Loma Linda University	464	267	197	19
218 University of Montana	456	352	104	4
219 Miami University	454	398	56	15
220 University of South Alabama	453	221	232	13
Total, 1st 220 insts.	364,179	252,834	111,345	25,711
221 Univ of North Carolina at Greensboro	447	318	129	0
222 Idaho State University	445	214	231	0
223 University of Alaska at Fairbanks	444	346	98	6
224 Univ of Texas Hlth Sci Ctr San Antonio	443	312	131	157
225 Michigan Technological University	442	367	75	3
226 South Dakota State University	437	293	144	6
227 Baylor University	430	339	91	8
228 Hahnemann University	406	339	67	28
229 Brandeis University	392	391	1	93
230 East Carolina University	382	281	101	21
Total, 1st 230 insts.	368,447	256,034	112,413	26,033
231 East Texas State University	377	161	216	0
232 University of Puerto Rico	364	360	4	0
233 Dartmouth College	352	350	2	58
234 Indiana State University	352	213	139	1
235 Pacific Grad School of Prof Psych	347	116	231	0
236 Ball State University	333	234	99	0
237 University of North Dakota	332	272	60	5
238 Sam Houston State University	328	179	149	0
239 Lamar University	320	255	65	0
240 East Tennessee State University	318	114	204	0
Total, 1st 240 insts.	371,870	258,288	113,582	26,097

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Table E-4. Graduate science/engineering enrollment by enrollment status
and total postdoctorates in doctorate-granting institutions,
ranked by total graduate science/engineering enrollment: 1989
-Continued

Institutional ranking	Total students	Full-time students	Part-time students	Postdoc-torates
241 Univ of Texas SW Medical Ctr at Dallas	318	317	1	244
242 Duquesne University	314	143	171	0
243 University of Missouri - St Louis	313	156	157	9
244 Clark Atlanta University	312	219	93	2
245 Central Michigan University	312	244	68	0
246 Clarkson University	308	298	10	36
247 College of William and Mary	302	251	51	8
248 California Institute of Integral Studie	300	138	162	0
249 Fuller Theological Seminary	295	271	24	0
250 New York Medical College	290	91	199	34
Total, 1st 250 insts.	374,934	260,416	114,518	26,430
251 Univ of Med and Dent of New Jersey	285	259	26	138
252 Medical College of Ohio at Toledo	285	101	184	23
253 Tennessee Technological University	285	207	78	0
254 Seton Hall University	278	66	212	0
255 South Dakota School of Mines and Tech	274	171	103	0
256 Baylor College of Medicine	266	266	0	210
257 Louisiana Tech University	263	186	77	0
258 University of Nebraska Medical Center	263	106	157	38
259 Forest Institute of Prof Psych	260	159	101	0
260 University of Tulsa	257	160	97	0
Total, 1st 260 insts.	377,650	262,097	115,553	26,839
261 Clark University	238	206	32	4
262 Calif Sch of Prof Psych - Fresno	235	206	29	0
263 Univ of Texas Med Branch at Galveston	231	198	33	99
264 New Mexico Institute of Mining and Tech	217	217	0	0
265 Marshall University	216	109	107	0
266 Medical College of Georgia	214	97	117	44
267 Center for Adv Studies on PR & Caribbea	213	160	53	0
268 University of Tennessee, Memphis	207	148	59	62
269 Wake Forest University	206	185	21	58
270 Stephen F. Austin State University	205	147	58	1
Total, 1st 270 insts.	379,832	263,770	116,062	27,107
271 University of South Dakota	200	151	49	1
272 Andrews University	189	101	88	0
273 Northeast Louisiana University	188	157	31	0
274 Union College(NY)	176	41	135	0
275 The Wright Institute	174	174	0	0
276 Biola University	173	140	33	0
277 University of Arkansas - Med Sci Campus	172	80	92	8
278 University of the Pacific	156	146	10	1
279 Spalding University	151	38	113	0
280 Oregon Grad Inst of Science & Technolog	148	113	35	8
Total, 1st 280 insts.	381,559	264,911	116,648	27,125
281 Mercer University	144	3	141	0
282 Chicago School of Prof Psych	144	76	68	0
283 Alfred University	143	129	14	2
284 Texas Christian University	143	99	44	11
285 Florida A & M University	140	115	25	5
286 Thomas Jefferson University	137	82	55	89
287 Creighton University	136	63	73	6
288 CUNY Mt. Sinai Sch of Medicine	135	135	0	0
289 Uniformed Serv Univ of the Hlth Science	126	126	0	50
290 Rockefeller University	121	121	0	210
Total, 1st 290 insts.	382,928	265,860	117,068	27,498
291 University of Health Sciences (Chicago)	117	117	0	12
292 Bryn Mawr College	116	41	75	0
293 Wesleyan University	115	108	7	8
294 Medical University of South Carolina	108	94	14	32
295 Indiana University of Pennsylvania	103	71	32	0
296 SUNY - Health Sci Ctr at Brooklyn	100	99	1	28
297 Albany Medical Center Graduate School	100	97	3	12
298 The Medical College of Pennsylvania	92	74	18	36
299 Oregon Health Sciences University	88	82	6	21
300 SUNY - Health Sci Ctr at Syracuse	84	79	5	29
Total, 1st 300 insts.	383,951	266,722	117,229	27,676

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Table E-4. Graduate science/engineering enrollment by enrollment status and total postdoctorates in doctorate-granting institutions, ranked by total graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total students	Full-time students	Part-time students	Postdoc-torates
301 Medical College of Wisconsin	84	73	11	69
302 University of Northern Iowa	83	69	14	0
303 Xavier University	76	65	11	0
304 CUNY Herbert H. Lehman College	75	13	62	0
305 Mayo Graduate School	74	74	0	141
306 Eastern Virginia Medical School	70	57	13	20
307 Maharishi International University	68	68	0	2
308 University of Maryland Eastern Shore	62	23	39	0
309 Catholic University of Puerto Rico	61	53	8	0
310 Rand Graduate Institute Policy Studies	60	60	0	0
Total, 1st 310 insts.	384,664	267,277	117,387	27,908
311 Baylor College of Dentistry	57	41	16	0
312 Philadelphia Coll of Pharmacy and Sci	46	40	6	1
313 Institute of Paper Science & Technology	45	45	0	3
314 Mass College of Pharmacy/Allied Health	39	34	5	0
315 Meharry Medical College	35	35	0	6
316 Oral Roberts University	33	16	17	0
317 SUNY State College of Optometry	33	15	18	1
318 Institute of Textile Technology	30	30	0	0
319 Ponce School of Medicine	22	17	5	0
320 Phila College of Osteopathic Medicine	15	0	15	0
Total, 1st 320 insts.	385,019	267,550	117,469	27,919
321 Smith College	6	4	2	0
322 West Virginia Sch of Osteopathic Med	0	0	0	0
323 Woods Hole Oceanographic Institution	0	0	0	5
324 University of New England	0	0	0	0
325 Chicago Coll of Osteo Medicine	0	0	0	0
326 Morehouse School of Medicine	0	0	0	4
327 Texas College of Osteopathic Medicine	0	0	0	24
328 University of Health Sciences (Kansas C	0	0	0	0
329 Univ of Texas MD Anderson Cancer Center	0	0	0	204
330 Univ. of Osteopathic Med & Health Sci	0	0	0	0
Total, 1st 330 insts.	385,025	267,554	117,471	28,156
331 Kirksville College of Osteopathic Med	0	0	0	1
332 NE Ohio Univ Med School	0	0	0	0
333 Providence College	0	0	0	0
334 Charles R. Drew Univ of Medicine & Sci	0	0	0	0
Total, 1st 334 insts.	385,025	267,554	117,471	28,157

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-5. Female graduate science/engineering enrollment by enrollment status and female postdoctorates in doctorate-granting institutions, ranked by female graduate science/engineering enrollment: 1989

Institutional ranking	Total female students	Female full-time students	Female part-time students	Female postdoctorates
Total, all institutions	141,500	92,543	48,957	7,479
1 University of Minnesota	2,075	1,704	371	78
2 University of Wisconsin - Madison	1,900	1,533	367	140
3 Texas Woman's University	1,874	635	1,239	1
4 University of Calif at Los Angeles	1,768	1,711	57	196
5 University of Southern California	1,751	958	793	60
6 Ohio State University	1,711	1,317	394	66
7 Indiana University	1,664	915	749	60
8 University of Washington	1,660	1,250	410	180
9 University of Calif at Berkeley	1,615	1,615	0	187
10 University of Pittsburgh	1,600	769	831	66
Total, 1st 10 insts.	17,618	12,407	5,211	1,034
11 George Washington University	1,586	578	1,008	4
12 Rutgers the State University	1,580	696	884	47
13 Univ of North Carolina at Chapel Hill	1,517	1,225	292	122
14 New York University	1,486	620	866	52
15 University of Colorado	1,400	981	419	101
16 Columbia University Teachers College	1,385	481	904	0
17 University of Michigan	1,376	1,275	101	116
18 University of Illinois at Chicago	1,331	743	588	49
19 Pennsylvania State University	1,274	959	315	32
20 University of Illinois at Urbana	1,273	1,234	39	67
Total, 1st 20 insts.	31,826	21,199	10,627	1,624
21 University of Massachusetts	1,265	660	605	55
22 University of Maryland - College Park	1,219	710	509	27
23 SUNY - Buffalo	1,217	701	516	77
24 Texas A & M University	1,213	998	215	34
25 Cornell University	1,183	1,183	0	115
26 Wayne State University	1,154	567	587	40
27 University of Arizona	1,106	831	275	66
28 University of Florida	1,099	646	453	59
29 Purdue University	1,092	960	132	34
30 Univ of Texas at Austin	1,087	979	108	30
Total, 1st 30 insts.	43,461	29,434	14,027	2,161
31 Columbia University Main Division	1,017	732	285	120
32 University of Connecticut	1,016	684	332	35
33 SUNY - Stony Brook	1,013	607	406	48
34 Michigan State University	1,013	811	202	53
35 Harvard University	1,013	951	62	534
36 San Diego State University	1,004	450	554	3
37 Arizona State University	973	559	414	15
38 CUNY Graduate School and Univ Center	963	845	118	6
39 University of Kansas	959	438	521	41
40 University of Cincinnati	954	613	341	38
Total, 1st 40 insts.	53,386	36,124	17,262	3,054
41 Boston University	952	629	323	9
42 Stanford University	945	886	59	227
43 University of Tennessee at Knoxville	925	600	325	29
44 Nova University	884	732	152	0
45 University of Oklahoma	874	453	421	14
46 University of Calif at Davis	866	831	35	68
47 Virginia Commonwealth University	858	525	333	41
48 North Carolina State Univ at Raleigh	857	655	202	41
49 George Mason University	854	221	633	0
50 Yale University	841	725	116	217
Total, 1st 50 insts.	62,242	42,381	19,861	3,700
51 Virginia Polytechnic Inst and State Uni	833	619	214	14
52 University of Pennsylvania	821	757	64	157
53 Massachusetts Institute of Technology	817	783	34	99
54 University of South Carolina	802	454	348	8
55 Iowa State University of Sci & Tech	801	649	152	15
56 Northeastern University	795	382	413	9
57 The University of Alabama at Birmingham	787	492	295	71
58 University of Wisconsin - Milwaukee	785	367	418	7
59 University of Calif at San Francisco	783	769	14	274
60 University of South Florida	780	418	362	9
Total, 1st 60 insts.	70,246	48,071	22,175	4,363

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Table E-5. Female graduate science/engineering enrollment by enrollment status and female postdoctorates in doctorate-granting institutions, ranked by female graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total female students	Female full-time students	Female part-time students	Female postdoc-torates
61 University of Hawaii at Manoa	765	605	160	11
62 Long Island University	760	163	597	0
63 Antioch University	758	588	170	0
64 Syracuse University	737	391	346	12
65 Johns Hopkins University	737	623	114	213
66 Adelphi University	728	179	549	0
67 University of Puerto Rico - Rio Piedras	720	418	302	1
68 University of Kentucky	716	498	218	34
69 University of Iowa	714	511	203	64
70 Temple University	693	490	203	35
Total, 1st 70 insts.	77,574	52,537	25,037	4,733
71 The American University	690	330	360	0
72 University of Maryland - Balt Prof Sch	676	263	413	25
73 Pace University	675	78	597	0
74 Northwestern University	673	637	36	60
75 Louisiana State University System	665	536	129	43
76 Colorado State University	643	474	169	32
77 University of Houston-University Park	628	377	251	12
78 Western Michigan University	618	313	305	0
79 Southern Illinois Univ at Carbondale	610	448	162	6
80 University of Utah	601	410	191	41
Total, 1st 80 insts.	84,053	56,403	27,650	4,952
81 University of Chicago	600	600	0	102
82 CUNY Hunter College	600	176	424	2
83 De Paul University	593	253	340	0
84 Case Western Reserve University	593	341	252	61
85 University of Missouri - Columbia	588	400	188	33
86 West Virginia University	579	336	243	12
87 University of Akron	564	294	270	6
88 University of Rhode Island	556	356	200	8
89 Georgia State University	554	322	232	9
90 University of Georgia	539	466	73	34
Total, 1st 90 insts.	89,819	59,947	29,872	5,219
91 Univ of Texas at Arlington	539	219	320	4
92 Tufts University	536	435	101	80
93 University of Virginia	531	506	25	57
94 Georgia Institute of Technology	515	406	109	8
95 Northern Illinois University	510	325	185	3
96 St. Louis University	509	206	303	11
97 University of Calif at San Diego	505	481	24	162
98 University of New Mexico	501	335	166	22
99 Kent State University	498	260	238	0
100 Florida State University	494	346	148	16
Total, 1st 100 insts.	94,957	63,466	31,491	5,582
101 University of Lowell	491	195	296	1
102 University of North Texas	487	350	137	5
103 University of Missouri - Kansas City	487	146	341	3
104 Old Dominion University	487	226	261	2
105 University of Miami	481	341	140	24
106 Emory University	478	346	132	27
107 Georgetown University	475	297	178	16
108 Wright State University	471	191	280	4
109 Northern Arizona University	464	218	246	0
110 Oklahoma State University	462	184	278	10
Total, 1st 110 insts.	99,740	65,960	33,780	5,674
111 Univ of Texas Hlth Sci Ctr at Houston	462	246	216	0
112 University of Puerto Rico Med Sci Campu	461	296	165	2
113 SUNY - Albany	459	308	151	8
114 Kansas State University	456	366	90	15
115 New Jersey Institute of Technology	456	203	253	0
116 Auburn University	455	349	106	14
117 Carnegie-Mellon University	453	270	183	17
118 Oregon State University	441	396	45	17
119 Duke University	438	406	32	96
120 SUNY - Binghamton	434	222	212	2
Total, 1st 120 insts.	104,255	69,022	35,233	5,845

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Table E-5. Female graduate science/engineering enrollment by enrollment status and female postdoctorates in doctorate-granting institutions, ranked by female graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total female students	Female full-time students	Female part-time students	Female postdoctorates
121 Catholic University of America	429	160	269	4
122 Yeshiva University	420	329	91	80
123 Rush University	419	212	207	8
124 Tulane University of Louisiana	416	337	79	3
125 University of Louisville	412	241	171	10
126 New School for Social Research	410	204	206	0
127 University of Rochester	410	352	58	61
128 University of Delaware	410	255	155	12
129 Fairleigh Dickinson University	407	92	315	0
130 Univ of Texas at Dallas	403	205	198	0
Total, 1st 130 insts.	108,391	71,409	36,982	6,023
131 Cleveland State University	396	145	251	4
132 Washington University	394	346	48	95
133 University of Nebraska - Lincoln	382	295	87	12
134 Wichita State University	380	103	277	0
135 Clemson University	377	298	79	1
136 Calif Sch of Prof Psych - Los Angeles	374	287	87	0
137 Boston College	370	218	152	5
138 Calif Sch of Prof Psych-Berkeley/Alamed	370	316	54	0
139 University of Central Florida	369	191	178	1
140 University of Calif at Santa Barbara	368	359	9	21
Total, 1st 140 insts.	112,171	73,967	38,204	6,162
141 Loyola University of Chicago	358	213	145	10
142 Vanderbilt University	353	325	28	54
143 Santa Clara University	353	61	292	0
144 Washington State University	351	309	42	18
145 University of Calif at Irvine	345	330	15	61
146 New York Institute of Technology	341	100	241	0
147 Ohio University	336	298	38	1
148 Portland State University	334	137	197	0
149 Univ of North Carolina at Greensboro	333	242	91	0
150 University of Maryland - Baltimore Cnty	331	199	132	4
Total, 1st 150 insts.	115,606	76,181	39,425	6,310
151 Illinois Institute of Technology	327	127	200	3
152 Calif Sch of Prof Psych - San Diego	325	255	70	0
153 Princeton University	321	321	0	47
154 Illinois State University	318	215	103	0
155 The Fielding Institute	318	318	0	0
156 Texas Tech University	317	269	48	1
157 University of Denver	315	211	104	15
158 Hofstra University	308	170	138	0
159 University of Mississippi	308	193	115	10
160 Memphis State University	305	183	122	1
Total, 1st 160 insts.	118,768	78,443	40,325	6,387
161 University of Southern Mississippi	301	182	119	2
162 Marquette University	297	153	144	1
163 Rensselaer Polytechnic Institute	294	188	106	6
164 University of Northern Colorado	294	137	157	1
165 Utah State University	291	245	46	15
166 Mississippi State University	287	216	71	3
167 Univ of Texas at El Paso	286	99	187	1
168 Howard University	282	179	103	3
169 St John's University	280	165	115	2
170 Villanova University	279	64	215	0
Total, 1st 170 insts.	121,659	80,071	41,588	6,421
171 Florida Institute of Technology	276	141	135	1
172 US International University	274	115	159	0
173 University of South Alabama	272	110	162	2
174 Univ of Texas Hlth Sci Ctr San Antonio	270	165	105	55
175 Drexel University	270	131	139	4
176 Hahnemann University	267	222	45	11
177 Polytechnic University	265	37	228	2
178 Loma Linda University	265	137	128	6
179 University of Wyoming	263	187	76	5
180 Union Institute	262	262	0	0
Total, 1st 180 insts.	124,343	81,578	42,765	6,507

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Table E-5. Female graduate science/engineering enrollment by enrollment status and female postdoctorates in doctorate-granting institutions, ranked by female graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total female students	Female full-time students	Female part-time students	Female postdoc-torates
181 University of New Hampshire	254	161	93	0
182 University of Calif at Riverside	253	238	15	35
183 University of Vermont & St Agric Colleg	251	194	57	20
184 University of Nevada at Reno	247	173	74	6
185 University of Arkansas	240	189	51	9
186 Bowling Green State University	240	188	52	4
187 University of Detroit	237	77	160	0
188 University of Notre Dame	234	225	9	9
189 The University of Alabama in Huntsville	233	116	117	0
190 East Carolina University	231	160	71	10
Total, 1st 190 insts.	126,763	83,299	43,464	6,600
191 Oakland University	230	69	161	0
192 University of Oregon	229	201	28	19
193 Florida International University	228	87	141	1
194 New Mexico State University	226	154	72	4
195 Stevens Institute of Technology	222	38	184	0
196 Miami University	221	192	29	6
197 University of Maine at Orono	221	170	51	6
198 Fordham University	217	114	103	0
199 Idaho State University	214	88	126	0
200 The University of Alabama	207	178	29	5
Total, 1st 200 insts.	128,978	84,590	44,388	6,641
201 Brigham Young University	207	109	98	5
202 University of Nebraska - Omaha	204	53	151	0
203 Brown University	203	183	20	17
204 Rice University	203	193	10	16
205 Golden Gate University	199	13	186	0
206 University of Idaho	198	114	84	5
207 Southern Methodist University	197	51	146	1
208 Baylor University	193	139	54	1
209 CUNY City College	192	95	97	0
210 South Dakota State University	192	74	118	1
Total, 1st 210 insts.	130,966	85,614	45,352	6,687
211 Seton Hall University	190	42	148	0
212 California Institute of Technology	185	185	0	58
213 University of Montana	184	138	46	2
214 Medical College of Ohio at Toledo	183	48	135	6
215 Lehigh University	182	126	56	6
216 Duquesne University	181	70	111	0
217 University of Toledo	178	118	60	4
218 Worcester Polytechnic Institute	178	58	120	0
219 Claremont Univ Center & Graduate School	176	54	122	0
220 University of Calif at Santa Cruz	174	174	0	4
Total, 1st 220 insts.	132,777	86,627	46,150	6,767
221 University of Nebraska Medical Center	173	44	129	7
222 New York Medical College	173	42	131	12
223 US Naval Postgraduate School	170	170	0	0
224 North Dakota State University	170	131	39	4
225 California Institute of Integral Studie	168	76	92	0
226 Florida Atlantic University	167	57	110	0
227 Center for Adv Studies on PR & Caribbea	166	127	39	0
228 East Tennessee State University	165	59	106	0
229 Pacific Grad School of Prof Psych	164	63	101	0
230 Univ of Texas SW Medical Ctr at Dallas	162	161	1	71
Total, 1st 230 insts.	134,455	87,557	46,898	6,861
231 University of Missouri - Rolla	161	74	87	1
232 Ball State University	160	93	67	0
233 Forest Institute of Prof Psych	156	90	66	0
234 SUNY - Coll of Env Science and Forestry	154	94	60	0
235 Brandeis University	154	154	0	23
236 Fuller Theological Seminary	153	138	15	0
237 Medical College of Georgia	152	56	96	14
238 East Texas State University	150	61	89	0
239 Andrews University	145	71	74	0
240 University of Alaska at Fairbanks	142	105	37	1
Total, 1st 240 insts.	135,982	88,493	47,489	6,900

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Table E-5. Female graduate science/engineering enrollment by enrollment status and female postdoctorates in doctorate-granting institutions, ranked by female graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total female students	Female full-time students	Female part-time students	Female postdoctorates
241 Central Michigan University	142	116	26	0
242 University of Southwestern Louisiana	141	96	45	2
243 Colorado School of Mines	137	75	62	0
244 University of Dayton	137	50	87	0
245 University of Missouri - St Louis	137	76	61	0
246 Indiana State University	136	82	54	1
247 Calif Sch of Prof Psych - Fresno	136	116	20	0
248 University of Tennessee, Memphis	134	81	53	12
249 University of Arkansas - Med Sci Campus	132	51	81	1
250 University of North Dakota	131	106	25	5
Total, 1st 250 insts.	137,345	89,342	48,003	6,921
251 Marshall University	130	61	69	0
252 Montana State University	124	97	27	6
253 The Wright Institute	122	122	0	0
254 Baylor College of Medicine	121	121	0	68
255 University of Puerto Rico	120	120	0	0
256 Univ of Texas Med Branch at Galveston	120	90	30	29
257 Clark University	119	100	19	0
258 Sam Houston State University	118	72	46	0
259 Univ of Med and Dent of New Jersey	116	102	14	66
260 Spalding University	109	30	79	0
Total, 1st 260 insts.	138,544	90,257	48,287	7,090
261 College of William and Mary	102	84	18	0
262 University of Tulsa	101	79	22	0
263 University of the Pacific	100	97	3	0
264 Lamar University	98	77	21	0
265 Thomas Jefferson University	98	46	52	39
266 Dartmouth College	96	95	1	21
267 Wake Forest University	96	88	8	16
268 Michigan Technological University	94	75	19	0
269 Tennessee Technological University	92	43	49	0
270 Bryn Mawr College	88	32	56	0
Total, 1st 270 insts.	139,509	90,973	48,536	7,166
271 University of South Dakota	87	71	16	0
272 Biola University	80	66	14	0
273 Northeast Louisiana University	80	67	13	0
274 Florida A & M University	73	60	13	3
275 Clark Atlanta University	73	57	16	0
276 Creighton University	72	18	54	1
277 Stephen F. Austin State University	66	50	16	0
278 Union College(NY)	66	25	41	0
279 University of Health Sciences (Chicago)	65	65	0	5
280 Clarkson University	63	59	4	6
Total, 1st 280 insts.	140,234	91,511	48,723	7,181
281 Uniformed Serv Univ of the Hlth Science	57	57	0	29
282 University of Northern Iowa	57	49	8	0
283 The Medical College of Pennsylvania	54	41	13	17
284 Texas Christian University	52	41	11	2
285 Catholic University of Puerto Rico	48	42	6	0
286 Albany Medical Center Graduate School	48	46	2	2
287 South Dakota School of Mines and Tech	48	28	20	0
288 Alfred University	46	41	5	0
289 CUNY Mt. Sinai Sch of Medicine	46	46	0	0
290 Rockefeller University	44	44	0	76
Total, 1st 290 insts.	140,734	91,946	48,788	7,307
291 Louisiana Tech University	43	32	11	0
292 Wesleyan University	43	41	2	3
293 Oregon Health Sciences University	43	43	0	9
294 Indiana University of Pennsylvania	42	27	15	0
295 Medical University of South Carolina	39	31	8	8
296 New Mexico Institute of Mining and Tech	37	37	0	0
297 Eastern Virginia Medical School	36	35	1	5
298 Mercer University	36	2	34	0
299 SUNY - Health Sci Ctr at Syracuse	35	32	3	6
300 Air Force Institute of Technology	34	34	0	0
Total, 1st 300 insts.	141,122	92,260	48,862	7,338

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Table E-5. Female graduate science/engineering enrollment by enrollment status and female postdoctorates in doctorate-granting institutions, ranked by female graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total female students	Female full-time students	Female part-time students	Female postdoctorates
301 SUNY - Health Sci Ctr at Brooklyn	34	34	0	5
302 Medical College of Wisconsin	32	28	4	21
303 Xavier University	31	25	6	0
304 Oral Roberts University	27	11	16	0
305 Oregon Grad Inst of Science & Technolog	26	20	6	1
306 CUNY Herbert H. Lehman College	25	3	22	0
307 Mayo Graduate School	24	24	0	33
308 University of Maryland Eastern Shore	23	11	12	0
309 Rand Graduate Institute Policy Studies	22	22	0	0
310 Meharry Medical College	21	21	0	2
Total, 1st 310 insts.	141,387	92,459	48,928	7,400
311 SUNY State College of Optometry	20	9	11	0
312 Philadelphia Coll of Pharmacy and Sci	19	16	3	0
313 Mass College of Pharmacy/Allied Health	17	14	3	0
314 Baylor College of Dentistry	14	7	7	0
315 Maharishi International University	13	13	0	1
316 Ponce School of Medicine	12	9	3	0
317 Institute of Paper Science & Technology	9	9	0	0
318 Smith College	6	4	2	0
319 Institute of Textile Technology	3	3	0	0
320 Univ of Texas MD Anderson Cancer Center	0	0	0	70
Total, 1st 320 insts.	141,500	92,543	48,957	7,471
321 West Virginia Sch of Osteopathic Med	0	0	0	0
322 Providence College	0	0	0	0
323 Chicago Coll of Osteo Medicine	0	0	0	0
324 Kirksville College of Osteopathic Med	0	0	0	0
325 University of Health Sciences (Kansas C	0	0	0	0
326 NE Ohio Univ Med School	0	0	0	0
327 Morehouse School of Medicine	0	0	0	1
328 University of New England	0	0	0	0
329 Phila College of Osteopathic Medicine	0	0	0	0
330 Chicago School of Prof Psych	0	0	0	0
Total, 1st 330 insts.	141,500	92,543	48,957	7,472
331 Univ. of Osteopathic Med & Health Sci	0	0	0	0
332 Texas College of Osteopathic Medicine	0	0	0	7
333 Woods Hole Oceanographic Institution	0	0	0	0
334 Charles R. Drew Univ of Medicine & Sci	0	0	0	0
Total, 1st 334 insts.	141,500	92,543	48,957	7,479

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-6. Minority graduate science/engineering enrollment in doctorate-granting institutions by racial/ethnic background, ranked by minority graduate science/engineering enrollment: 1989

Institutional ranking	Total minority students	Black non-Hispanic	American Indian/ Alaskan	Asian/ Pacific Islander	Hispanic
Total, all institutions	36,282	10,667	916	14,809	9,890
1 University of Puerto Rico - Rio Piedras	1,081	0	0	0	1,081
2 University of Southern California	1,015	197	12	584	222
3 New Jersey Institute of Technology	836	86	0	678	72
4 University of Calif at Los Angeles	775	132	15	451	177
5 University of Calif at Berkeley	673	148	29	326	170
6 University of Puerto Rico Med Sci Campu	597	0	0	0	597
7 Stanford University	468	60	19	319	70
8 University of Michigan	466	164	11	189	102
9 De Paul University	432	148	1	236	47
10 Massachusetts Institute of Technology	405	73	6	270	56
Total, 1st 10 insts.	6,748	1,008	93	3,053	2,594
11 Texas A & M University	401	92	9	73	227
12 Rutgers the State University	398	147	0	171	80
13 Howard University	398	370	0	25	3
14 New York University	391	163	1	126	101
15 University of Hawaii at Manoa	384	9	12	353	10
16 University of Maryland - College Park	381	159	3	167	52
17 University of Illinois at Urbana	362	63	8	228	63
18 George Washington University	346	154	10	109	73
19 Santa Clara University	338	12	3	299	24
20 University of Illinois at Chicago	336	94	5	178	59
Total, 1st 20 insts.	10,483	2,271	144	4,782	3,286
21 University of Wisconsin - Madison	333	52	13	173	95
22 Florida International University	326	69	0	29	228
23 Columbia University Teachers College	325	171	3	64	87
24 University of Houston-University Park	320	48	6	198	68
25 Wayne State University	315	189	6	84	36
26 Pennsylvania State University	301	96	13	154	38
27 Univ of Texas at Austin	292	43	4	92	153
28 University of Washington	289	36	16	181	56
29 Cornell University	284	65	11	146	62
30 Harvard University	274	95	8	110	61
Total, 1st 30 insts.	13,542	3,135	224	6,013	4,170
31 University of Florida	264	106	8	67	83
32 Ohio State University	264	139	3	72	50
33 Texas Woman's University	258	151	6	27	74
34 San Diego State University	256	37	8	121	90
35 University of Colorado	255	52	15	94	94
36 Georgia Institute of Technology	253	103	1	85	64
37 Purdue University	248	66	9	108	65
38 Polytechnic University	245	52	0	154	39
39 Univ of North Carolina at Chapel Hill	245	123	11	86	25
40 University of Puerto Rico	243	0	0	0	243
Total, 1st 40 insts.	16,073	3,964	285	6,827	4,997
41 George Mason University	241	73	7	130	31
42 Univ of Texas at El Paso	238	13	3	6	216
43 University of Pittsburgh	231	94	0	101	36
44 North Carolina State Univ at Raleigh	231	125	3	73	30
45 CUNY City College	226	79	0	84	63
46 Louisiana State University System	226	75	2	97	52
47 Johns Hopkins University	223	37	24	144	18
48 University of Calif at Davis	218	34	11	108	65
49 Long Island University	214	168	0	19	27
50 SUNY - Stony Brook	213	48	6	120	39
Total, 1st 50 insts.	18,334	4,710	341	7,709	5,574
51 Pace University	209	72	5	86	46
52 Center for Adv Studies on PR & Caribbea	205	0	0	0	205
53 University of Tennessee at Knoxville	204	70	2	109	23
54 University of Oklahoma	204	74	57	41	32
55 CUNY Hunter College	199	112	1	48	38
56 University of Arizona	198	16	27	74	81
57 Florida State University	196	69	2	80	45
58 The University of Alabama at Birmingham	196	90	1	67	38
59 University of New Mexico	196	3	17	54	122
60 Temple University	192	87	1	62	42
Total, 1st 60 insts.	20,333	5,303	454	8,330	6,246

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Table E-6. Minority graduate science/engineering enrollment in doctorate-granting institutions by racial/ethnic background, ranked by minority graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total minority students	Black non-Hispanic	American Indian/ Alaskan	Asian/ Pacific Islander	Hispanic
61 Univ of Texas at Arlington	192	19	4	140	29
62 University of Miami	191	45	0	21	125
63 Georgia State University	189	150	0	24	15
64 CUNY Graduate School and Univ Center	187	87	0	39	61
65 University of Calif at Irvine	187	13	3	135	36
66 Mississippi State University	183	44	1	87	51
67 University of Minnesota	181	32	4	115	30
68 Univ of Texas Hlth Sci Ctr at Houston	177	53	2	50	72
69 Stevens Institute of Technology	177	22	0	125	30
70 University of Pennsylvania	175	45	0	102	28
Total, 1st 70 insts.	22,172	5,813	468	9,168	6,723
71 University of Calif at San Diego	174	16	6	99	53
72 Michigan State University	174	88	9	35	42
73 Illinois Institute of Technology	172	43	1	93	35
74 Northeastern University	171	27	3	124	17
75 SUNY - Buffalo	171	58	6	78	29
76 University of South Carolina	169	122	5	25	17
77 The American University	168	72	0	39	57
78 University of Missouri - Columbia	167	43	3	99	22
79 Virginia Polytechnic Inst and State Uni	162	41	2	103	16
80 University of South Florida	162	67	1	23	71
Total, 1st 80 insts.	23,862	6,390	504	9,886	7,082
81 University of Cincinnati	160	79	1	49	31
82 Yale University	159	48	0	96	15
83 Indiana University	158	66	2	44	46
84 Virginia Commonwealth University	157	110	1	31	15
85 Univ of Texas at Dallas	155	25	3	99	28
86 University of Massachusetts	155	45	5	55	50
87 Arizona State University	153	27	12	31	83
88 New York Institute of Technology	146	68	0	50	28
89 Syracuse University	145	41	1	88	15
90 University of Calif at San Francisco	144	26	3	71	44
Total, 1st 90 insts.	25,394	6,925	532	10,500	7,437
91 Nova University	142	56	5	12	69
92 Golden Gate University	140	100	5	13	22
93 Columbia University Main Division	139	25	0	73	41
94 Clark Atlanta University	139	128	0	10	1
95 Boston University	138	26	3	74	35
96 University of Chicago	137	33	4	56	44
97 Catholic University of America	136	51	2	62	21
98 Southern Methodist University	134	19	0	94	21
99 University of Central Florida	134	37	1	48	48
100 University of Calif at Santa Barbara	133	20	6	66	41
Total, 1st 100 insts.	26,766	7,420	558	11,008	7,780
101 University of Lowell	131	8	0	112	11
102 University of Connecticut	128	22	1	77	28
103 University of Louisville	128	43	3	76	6
104 University of Virginia	125	60	3	47	15
105 Carnegie-Mellon University	123	46	1	60	16
106 Northwestern University	121	15	2	86	18
107 University of Wisconsin - Milwaukee	120	54	7	29	30
108 Oakland University	116	24	1	87	4
109 University of Akron	116	65	0	46	5
110 Oklahoma State University	115	31	22	38	24
Total, 1st 110 insts.	27,989	7,788	598	11,666	7,937
111 Old Dominion University	114	64	2	37	11
112 Southern Illinois Univ at Carbondale	113	71	2	24	16
113 Cleveland State University	113	56	1	50	6
114 New Mexico State University	112	12	6	7	87
115 Calif Sch of Prof Psych - Los Angeles	111	37	1	24	49
116 New School for Social Research	110	40	1	29	40
117 Florida A & M University	106	98	0	3	5
118 University of Delaware	105	65	1	24	15
119 Western Michigan University	104	73	3	13	15
120 SUNY - Binghamton	103	30	0	38	35
Total, 1st 120 insts.	29,080	8,334	615	11,915	8,216

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Table E-6. Minority graduate science/engineering enrollment in doctorate-granting institutions by racial/ethnic background, ranked by minority graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total minority students	Black non-Hispanic	American Indian/ Alaskan	Asian/ Pacific Islander	Hispanic
121 University of Mississippi	103	63	1	33	6
122 University of Arkansas	103	17	7	63	16
123 Case Western Reserve University	94	18	0	64	12
124 Auburn University	93	52	2	22	17
125 University of Kentucky	93	29	1	53	10
126 Colorado State University	92	10	8	38	36
127 Rensselaer Polytechnic Institute	92	16	0	56	20
128 Fairleigh Dickinson University	91	27	4	38	22
129 University of Utah	90	1	3	66	20
130 University of Nebraska - Lincoln	86	19	2	47	18
Total, 1st 130 insts.	30,017	8,586	643	12,395	8,393
131 University of Georgia	85	38	6	31	10
132 Washington University	85	19	0	63	3
133 Northern Arizona University	84	13	18	8	45
134 Princeton University	81	19	0	47	15
135 University of Iowa	80	26	1	38	15
136 Wright State University	80	37	2	31	10
137 University of Calif at Santa Cruz	79	13	1	28	37
138 Northern Illinois University	79	23	0	46	10
139 Tulane University of Louisiana	79	38	1	17	23
140 Texas Tech University	78	20	0	13	45
Total, 1st 140 insts.	30,827	8,832	672	12,717	8,606
141 University of Missouri - Rolla	76	13	2	50	11
142 Emory University	73	48	0	18	7
143 Lehigh University	73	15	0	43	15
144 University of Detroit	73	58	2	10	3
145 The University of Alabama in Huntsville	71	20	1	43	7
146 California Institute of Technology	70	5	0	60	5
147 SUNY - Albany	69	25	0	26	18
148 Loma Linda University	68	14	3	35	16
149 Duke University	67	21	3	21	22
150 Adelphi University	67	36	4	8	19
Total, 1st 150 insts.	31,534	9,087	687	13,031	8,729
151 University of Nevada at Reno	66	4	1	52	9
152 University of Missouri - Kansas City	66	39	6	9	12
153 St. Louis University	64	29	1	26	8
154 University of Maryland - Balt Prof Sch	64	33	2	20	9
155 Washington State University	63	15	6	35	7
156 University of Calif at Riverside	63	9	4	25	25
157 Fordham University	63	19	0	11	33
158 University of Southern Mississippi	63	46	0	11	6
159 Florida Institute of Technology	61	16	1	18	26
160 US International University	61	22	6	12	21
Total, 1st 160 insts.	32,168	9,319	714	13,250	8,885
161 Drexel University	61	14	2	37	8
162 Claremont Univ Center & Graduate School	60	5	39	9	7
163 Catholic University of Puerto Rico	60	0	0	0	60
164 New Mexico Institute of Mining and Tech	59	0	1	47	11
165 West Virginia University	59	28	1	25	5
166 Wichita State University	57	15	11	19	12
167 University of Rochester	56	10	1	37	8
168 University of North Texas	56	29	0	2	25
169 Georgetown University	56	9	0	29	18
170 Portland State University	56	18	5	28	5
Total, 1st 170 insts.	32,748	9,447	774	13,483	9,044
171 University of Kansas	55	13	7	17	18
172 University of South Alabama	55	41	5	6	3
173 Iowa State University of Sci & Tech	54	30	1	12	11
174 Calif Sch of Prof Psych-Berkeley/Alamed	53	20	1	16	16
175 University of Toledo	53	22	0	24	7
176 East Texas State University	53	13	1	16	23
177 Tufts University	53	5	3	39	6
178 Vanderbilt University	53	21	3	19	10
179 Loyola University of Chicago	52	10	1	31	10
180 St John's University	51	19	0	28	4
Total, 1st 180 insts.	33,280	9,641	796	13,691	9,152

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Table E-6. Minority graduate science/engineering enrollment in doctorate-granting institutions by racial/ethnic background, ranked by minority graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total minority students	Black non-Hispanic	American Indian/ Alaskan	Asian/ Pacific Islander	Hispanic
181 North Dakota State University	50	7	6	23	14
182 Rush University	50	13	5	22	10
183 University of Rhode Island	49	9	0	22	18
184 Memphis State University	49	44	1	2	2
185 Oregon State University	48	7	1	29	11
186 University of Maryland - Baltimore Cnty	48	35	0	7	6
187 University of Denver	48	14	3	9	22
188 Yeshiva University	48	13	0	16	19
189 The University of Alabama	48	31	0	13	4
190 US Naval Postgraduate School	47	9	0	27	11
Total, 1st 190 insts.	33,765	9,823	812	13,861	9,269
191 Fuller Theological Seminary	46	7	2	26	11
192 Andrews University	46	22	0	19	5
193 Kansas State University	45	21	0	9	15
194 Brown University	45	7	2	18	18
195 Bowling Green State University	45	22	1	10	12
196 East Tennessee State University	44	17	0	25	2
197 University of Notre Dame	44	10	0	13	21
198 University of Missouri - St Louis	44	10	2	21	11
199 Clemson University	43	27	2	7	7
200 Illinois State University	42	21	0	14	7
Total, 1st 200 insts.	34,209	9,987	821	14,023	9,378
201 Rice University	42	7	0	27	8
202 Northeast Louisiana University	42	9	2	30	1
203 Union Institute	42	16	3	5	18
204 Hahnemann University	41	12	0	26	3
205 Boston College	40	7	0	24	9
206 Sam Houston State University	40	12	0	17	11
207 Villanova University	39	19	1	15	4
208 Hofstra University	39	19	0	16	4
209 Utah State University	38	2	11	16	9
210 Univ of Texas Hlth Sci Ctr San Antonio	37	7	1	10	19
Total, 1st 210 insts.	34,609	10,097	839	14,209	9,464
211 Seton Hall University	35	13	0	8	14
212 Kent State University	35	25	1	3	6
213 University of Oregon	35	3	3	23	6
214 CUNY Herbert H. Lehman College	34	10	0	14	10
215 Worcester Polytechnic Institute	33	3	0	12	18
216 Calif Sch of Prof Psych - Fresno	33	9	1	9	14
217 New York Medical College	32	16	0	9	7
218 Antioch University	32	10	2	7	13
219 University of Northern Colorado	30	2	2	11	15
220 Pacific Grad School of Prof Psych	30	5	2	12	11
Total, 1st 220 insts.	34,938	10,193	850	14,317	9,578
221 University of Vermont & St Agric Colleg	30	4	3	9	14
222 University of Alaska at Fairbanks	29	0	11	17	1
223 Wake Forest University	28	4	0	21	3
224 University of Dayton	28	8	1	8	11
225 Calif Sch of Prof Psych - San Diego	28	6	2	4	16
226 Ohio University	28	11	3	6	8
227 Univ of Med and Dent of New Jersey	28	6	0	17	5
228 Meharry Medical College	27	25	0	1	1
229 Univ of Texas Med Branch at Galveston	27	8	1	13	5
230 University of Wyoming	27	2	3	19	3
Total, 1st 230 insts.	35,218	10,267	874	14,432	9,645
231 Univ of North Carolina at Greensboro	27	27	0	0	0
232 Baylor University	26	10	1	4	11
233 Indiana University of Pennsylvania	25	11	0	13	1
234 University of Tennessee, Memphis	25	14	0	11	0
235 The Fielding Institute	25	14	2	1	8
236 Lamar University	25	9	0	4	12
237 Colorado School of Mines	24	5	0	2	17
238 University of Idaho	24	1	0	13	10
239 Marquette University	24	8	0	13	3
240 University of Southwestern Louisiana	23	11	0	9	3
Total, 1st 240 insts.	35,466	10,377	877	14,502	9,710

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Table E-6. Minority graduate science/engineering enrollment in doctorate-granting institutions by racial/ethnic background, ranked by minority graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total minority students	Black non-Hispanic	American Indian/ Alaskan	Asian/ Pacific Islander	Hispanic
241 East Caroline University	23	14	0	7	2
242 Ponce School of Medicine	22	0	0	0	22
243 Texas Christian University	22	2	0	10	10
244 Miami University	21	6	1	10	4
245 University of Tulsa	21	4	4	5	8
246 Xavier University	21	14	0	4	3
247 Dartmouth College	21	2	0	13	6
248 The Wright Institute	20	8	2	5	5
249 Marshall University	20	6	0	9	5
250 Mercer University	20	15	0	2	3
Total, 1st 250 insts.	35,677	10,448	884	14,567	9,778
251 College of William and Mary	20	7	1	10	2
252 University of Nebraska - Omaha	19	10	0	8	1
253 Clark University	19	5	1	8	5
254 Louisiana Tech University	19	14	0	4	1
255 Biola University	18	3	0	10	5
256 Florida Atlantic University	18	4	2	2	10
257 Indiana State University	18	11	0	4	3
258 Forest Institute of Prof Psych	18	9	1	4	4
259 Medical College of Georgia	18	14	0	0	4
260 University of the Pacific	17	1	3	9	4
Total, 1st 260 insts.	35,861	10,526	892	14,626	9,817
261 University of North Dakota	17	2	4	10	1
262 University of Montana	16	1	2	11	2
263 Univ of Texas SW Medical Ctr at Dallas	16	5	1	6	4
264 Central Michigan University	16	6	1	7	2
265 Uniformed Serv Univ of the Hlth Science	15	4	1	8	2
266 University of Maine at Orono	15	3	0	8	4
267 Medical University of South Carolina	15	2	0	12	1
268 Idaho State University	14	0	3	5	6
269 Brandeis University	14	1	0	10	3
270 Baylor College of Medicine	14	1	0	9	4
Total, 1st 270 insts.	36,013	10,551	904	14,712	9,846
271 University of Arkansas - Med Sci Campus	13	12	0	1	0
272 Eastern Virginia Medical School	12	10	0	1	1
273 South Dakota State University	12	0	5	6	1
274 CUNY Mt. Sinai Sch of Medicine	11	2	0	5	4
275 SUNY - Health Sci Ctr at Brooklyn	11	3	0	6	2
276 Tennessee Technological University	11	10	0	0	1
277 University of South Dakota	10	7	1	2	0
278 SUNY - Coll of Env Science and Forestry	9	4	0	2	3
279 Air Force Institute of Technology	9	9	0	0	0
280 SUNY - Health Sci Ctr at Syracuse	8	1	0	7	0
Total, 1st 280 insts.	36,119	10,609	910	14,742	9,858
281 Stephen F. Austin State University	8	3	0	2	3
282 Brigham Young University	8	1	0	6	1
283 Ball State University	7	4	0	1	2
284 Montana State University	7	0	3	4	0
285 University of Northern Iowa	7	5	0	1	1
286 Union College(NY)	7	2	0	4	1
287 Oregon Health Sciences University	7	0	0	5	2
288 Medical College of Ohio at Toledo	6	1	0	1	4
289 Rand Graduate Institute Policy Studies	6	1	0	5	0
290 Thomas Jefferson University	6	0	2	2	2
Total, 1st 290 insts.	36,188	10,626	915	14,773	9,874
291 Baylor College of Dentistry	6	1	0	3	2
292 Michigan Technological University	6	0	0	4	2
293 University of Maryland Eastern Shore	6	6	0	0	0
294 Creighton University	5	2	0	3	0
295 University of Health Sciences (Chicago)	5	3	0	2	0
296 University of Nebraska Medical Center	5	2	0	2	1
297 Medical College of Wisconsin	5	1	0	3	1
298 Wesleyan University	5	0	0	4	1
299 Rockefeller University	5	1	0	3	1
300 Duquesne University	5	4	0	0	1
Total, 1st 300 insts.	36,241	10,646	915	14,797	9,883

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Table E-6. Minority graduate science/engineering enrollment in doctorate-granting institutions by racial/ethnic background, ranked by minority graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total minority students	Black non-Hispanic	American Indian/ Alaskan	Asian/ Pacific Islander	Hispanic
301 Oregon Grad Inst of Science & Technolog	4	0	0	4	0
302 Spalding University	4	4	0	0	0
303 Chicago School of Prof Psych	4	3	0	0	1
304 Oral Roberts University	3	1	0	1	1
305 Alfred University	3	2	0	0	1
306 Mass College of Pharmacy/Allied Health	3	1	0	1	1
307 SUNY State College of Optometry	3	1	0	1	1
308 Mayo Graduate School	3	1	0	1	1
309 Albany Medical Center Graduate School	3	0	0	2	1
310 Philadelphia Coll of Pharmacy and Sci	3	1	0	2	0
Total, 1st 310 insts.	36,274	10,660	915	14,809	9,890
311 The Medical College of Pennsylvania	2	2	0	0	0
312 Maharishi International University	2	2	0	0	0
313 Bryn Mawr College	1	1	0	0	0
314 Clarkson University	1	0	1	0	0
315 Smith College	1	1	0	0	0
316 Institute of Textile Technology	1	1	0	0	0
317 Texas College of Osteopathic Medicine	0	0	0	0	0
318 University of New Hampshire	0	0	0	0	0
319 Phila College of Osteopathic Medicine	0	0	0	0	0
320 NE Ohio Univ Med School	0	0	0	0	0
Total, 1st 320 insts.	36,282	10,667	916	14,809	9,890
321 University of Health Sciences (Kansas C	0	0	0	0	0
322 Woods Hole Oceanographic Institution	0	0	0	0	0
323 Kirksville College of Osteopathic Med	0	0	0	0	0
324 South Dakota School of Mines and Tech	0	0	0	0	0
325 Univ of Texas MD Anderson Cancer Center	0	0	0	0	0
326 University of New England	0	0	0	0	0
327 Providence College	0	0	0	0	0
328 Institute of Paper Science & Technology	0	0	0	0	0
329 Univ. of Osteopathic Med & Health Sci	0	0	0	0	0
330 Morehouse School of Medicine	0	0	0	0	0
Total, 1st 330 insts.	36,282	10,667	916	14,809	9,890
331 West Virginia Sch of Osteopathic Med	0	0	0	0	0
332 Chicago Coll of Osteo Medicine	0	0	0	0	0
333 California Institute of Integral Studie	0	0	0	0	0
334 Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0
Total, 1st 334 insts.	36,282	10,667	916	14,809	9,890

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-7. Foreign graduate science/engineering enrollment by enrollment status and foreign postdoctorates in doctorate-granting institutions, ranked by foreign graduate science/engineering enrollment: 1989

Institutional ranking	Foreign graduate students	Foreign full-time students	Foreign part-time students	Foreign postdoctorates
Total, all institutions	96,326	83,388	12,938	13,113
1 Ohio State University	1,821	1,768	53	146
2 University of Wisconsin - Madison	1,728	1,719	9	171
3 University of Southern California	1,678	1,545	133	211
4 University of Minnesota	1,618	1,519	99	128
5 University of Illinois at Urbana	1,617	1,617	0	106
6 Univ of Texas at Austin	1,535	1,415	120	135
7 University of Michigan	1,515	1,426	89	199
8 Purdue University	1,488	1,457	31	107
9 Cornell University	1,385	1,385	0	199
10 Texas A & M University	1,370	1,263	107	124
Total, 1st 10 insts.	15,755	15,114	641	1,526
11 University of Calif at Berkeley	1,354	1,354	0	320
12 Massachusetts Institute of Technology	1,341	1,306	35	218
13 Pennsylvania State University	1,307	1,158	149	93
14 Michigan State University	1,297	1,097	200	102
15 University of Maryland - College Park	1,292	976	316	0
16 Wayne State University	1,198	648	550	65
17 Iowa State University of Sci & Tech	1,186	1,083	103	46
18 University of Calif at Los Angeles	1,184	1,178	6	281
19 Stanford University	1,130	1,097	33	328
20 University of Florida	1,038	772	266	174
Total, 1st 20 insts.	28,082	25,783	2,299	3,153
21 University of Arizona	1,029	906	123	109
22 George Washington University	1,014	506	508	13
23 SUNY - Buffalo	998	822	176	161
24 New Jersey Institute of Technology	991	613	378	0
25 University of Illinois at Chicago	949	765	184	84
26 Rutgers the State University	921	734	187	85
27 Arizona State University	921	771	150	29
28 University of Massachusetts	920	495	425	36
29 Columbia University Main Division	899	836	63	181
30 University of Pennsylvania	892	868	24	235
Total, 1st 30 insts.	37,616	33,099	4,517	4,086
31 SUNY - Stony Brook	888	721	167	127
32 Georgia Institute of Technology	884	748	136	24
33 Virginia Polytechnic Inst and State Uni	855	793	62	39
34 North Carolina State Univ at Raleigh	848	792	56	76
35 Syracuse University	834	507	327	22
36 University of Iowa	821	776	45	102
37 University of Pittsburgh	804	693	111	108
38 University of Washington	778	709	69	182
39 Harvard University	776	762	14	893
40 Oregon State University	771	745	26	23
Total, 1st 40 insts.	45,875	40,345	5,530	5,682
41 University of Cincinnati	733	681	52	53
42 University of Calif at Davis	684	673	11	117
43 CUNY Graduate School and Univ Center	683	634	49	16
44 New York University	672	498	174	98
45 Indiana University	670	645	25	73
46 University of Hawaii at Manoa	663	616	47	20
47 Northwestern University	650	636	14	124
48 University of Missouri - Columbia	647	510	137	52
49 University of Chicago	638	638	0	167
50 Kansas State University	632	590	42	30
Total, 1st 50 insts.	52,547	46,466	6,081	6,432
51 University of Oklahoma	626	509	117	61
52 Oklahoma State University	623	213	410	16
53 Louisiana State University System	620	570	50	100
54 Boston University	608	561	47	8
55 Case Western Reserve University	594	440	154	123
56 University of Connecticut	589	539	50	63
57 Rensselaer Polytechnic Institute	587	575	12	48
58 Illinois Institute of Technology	555	344	211	15
59 Colorado State University	539	364	175	65
60 University of Houston-University Park	530	427	103	60
Total, 1st 60 insts.	58,418	51,008	7,410	6,991

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Table E-7. Foreign graduate science/engineering enrollment by enrollment status and foreign postdoctorates in doctorate-granting institutions, ranked by foreign graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Foreign graduate students	Foreign full-time students	Foreign part-time students	Foreign postdoctorates
61 University of Kansas	527	333	194	110
62 University of Colorado	527	465	62	52
63 Utah State University	524	514	10	16
64 University of Utah	514	465	49	96
65 Univ of Texas at Arlington	495	426	69	25
66 Southern Illinois Univ at Carbondale	495	437	58	22
67 University of Kentucky	484	459	25	86
68 University of Georgia	483	450	33	74
69 Princeton University	483	482	1	115
70 Carnegie-Mellon University	479	473	6	63
Total, 1st 70 insts.	63,429	55,512	7,917	7,650
71 Clemson University	479	406	73	6
72 Auburn University	478	466	12	21
73 University of Rochester	469	462	7	89
74 Yale University	467	454	13	301
75 Ohio University	454	408	46	4
76 University of Calif at San Diego	441	428	13	230
77 California Institute of Technology	438	438	0	161
78 Santa Clara University	414	105	309	0
79 Johns Hopkins University	412	387	25	289
80 University of Akron	409	371	38	39
Total, 1st 80 insts.	67,890	59,437	8,453	8,790
81 University of South Carolina	402	343	59	12
82 University of Calif at Santa Barbara	402	402	0	77
83 Univ of North Carolina at Chapel Hill	380	366	14	157
84 University of Miami	379	338	41	57
85 The American University	368	215	153	2
86 University of Nebraska - Lincoln	367	348	19	36
87 Drexel University	367	278	89	25
88 US Naval Postgraduate School	366	366	0	5
89 New York Institute of Technology	363	260	103	0
90 Washington State University	362	350	12	28
Total, 1st 90 insts.	71,646	62,703	8,943	9,189
91 University of Delaware	359	313	46	23
92 West Virginia University	346	296	50	35
93 Texas Tech University	346	338	8	26
94 Temple University	340	295	45	62
95 Brown University	329	321	8	35
96 Vanderbilt University	328	322	6	97
97 Rice University	327	322	5	35
98 Washington University	325	321	4	137
99 Tulane University of Louisiana	324	315	9	15
100 Lehigh University	313	295	18	34
Total, 1st 100 insts.	74,983	65,841	9,142	9,688
101 University of Notre Dame	313	303	10	38
102 University of Lowell	306	304	2	3
103 University of Tennessee at Knoxville	305	270	35	74
104 SUNY - Albany	304	243	61	19
105 University of Missouri - Rolla	301	269	32	6
106 University of Wisconsin - Milwaukee	299	214	85	15
107 University of North Texas	294	258	36	7
108 University of Rhode Island	292	275	17	28
109 The University of Alabama	290	282	8	16
110 Florida State University	284	279	5	41
Total, 1st 110 insts.	77,971	68,538	9,433	9,935
111 Duke University	278	275	3	103
112 University of Toledo	277	255	22	13
113 Mississippi State University	272	255	17	13
114 Marquette University	272	240	32	8
115 CUNY City College	271	85	186	2
116 University of Calif at Irvine	264	256	8	111
117 University of Idaho	264	197	67	16
118 University of Southwestern Louisiana	255	225	30	2
119 University of Oregon	254	234	20	23
120 SUNY - Binghamton	242	178	64	3
Total, 1st 120 insts.	80,620	70,738	9,882	10,229

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Table E-7. Foreign graduate science/engineering enrollment by enrollment status and foreign postdoctorates in doctorate-granting institutions, ranked by foreign graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Foreign graduate students	Foreign full-time students	Foreign part-time students	Foreign postdoctorates
121 Tufts University	236	214	22	99
122 Wichita State University	236	106	130	0
123 University of Maryland - Baltimore Cnty	236	182	54	10
124 Howard University	235	145	90	13
125 Old Dominion University	231	185	46	4
126 University of South Florida	230	165	65	30
127 Western Michigan University	229	171	58	0
128 Univ of Texas at Dallas	227	206	21	0
129 The University of Alabama at Birmingham	223	206	17	109
130 New School for Social Research	221	98	123	0
Total, 1st 130 insts.	82,924	72,416	10,508	10,494
131 George Mason University	219	110	109	0
132 Florida Institute of Technology	211	151	60	4
133 University of Mississippi	207	202	5	30
134 Columbia University Teachers College	206	69	137	0
135 University of Virginia	202	196	6	98
136 North Dakota State University	198	186	12	9
137 University of Denver	198	118	80	13
138 Polytechnic University	197	163	34	11
139 Kent State University	196	171	25	0
140 Northern Illinois University	195	175	20	2
Total, 1st 140 insts.	84,953	73,957	10,996	10,661
141 Stevens Institute of Technology	195	166	29	2
142 Georgetown University	191	161	30	32
143 Clarkson University	190	188	2	30
144 Florida Atlantic University	188	132	56	0
145 University of Detroit	186	77	109	0
146 University of Calif at Riverside	184	178	6	59
147 Colorado School of Mines	183	178	5	0
148 San Diego State University	182	88	94	16
149 University of New Mexico	182	165	17	20
150 New Mexico State University	180	162	18	10
Total, 1st 150 insts.	86,814	75,452	11,362	10,830
151 Michigan Technological University	177	158	19	0
152 Lamar University	176	170	6	0
153 South Dakota School of Mines and Tech	176	127	49	0
154 Worcester Polytechnic Institute	173	151	22	8
155 Univ of Texas at El Paso	173	153	20	2
156 Clark Atlanta University	171	112	59	1
157 University of Wyoming	170	158	12	18
158 Brandeis University	168	167	1	43
159 Southern Methodist University	166	74	92	6
160 Portland State University	157	116	41	0
Total, 1st 160 insts.	88,521	76,838	11,683	10,908
161 Virginia Commonwealth University	148	137	11	66
162 University of Maine at Orono	147	143	4	5
163 University of Arkansas	146	138	8	18
164 Catholic University of America	145	76	69	5
165 University of Nevada at Reno	144	120	24	15
166 University of Louisville	134	104	30	21
167 Bowling Green State University	132	125	7	17
168 SUNY - Coll of Env Science and Forestry	132	103	29	1
169 The University of Alabama in Huntsville	132	127	5	0
170 St John's University	128	71	57	1
Total, 1st 170 insts.	89,909	77,982	11,927	11,057
171 Wright State University	126	78	48	5
172 Emory University	125	101	24	59
173 Montana State University	125	120	5	11
174 Brigham Young University	117	61	56	18
175 Univ of Texas Hlth Sci Ctr at Houston	116	100	16	0
176 University of Central Florida	116	75	41	7
177 University of Puerto Rico	110	109	1	0
178 University of Missouri - Kansas City	109	78	31	9
179 University of Maryland - Balt Prof Sch	109	92	17	41
180 Indiana State University	108	82	26	1
Total, 1st 180 insts.	91,070	78,878	12,192	11,208

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Table E-7. Foreign graduate science/engineering enrollment by enrollment status and foreign postdoctorates in doctorate-granting institutions, ranked by foreign graduate science/engineering enrollment: 1989
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Institutional ranking	Foreign graduate students	Foreign full-time students	Foreign part-time students	Foreign postdoctorates
181 Florida International University	105	72	33	1
182 Boston College	105	100	5	13
183 Texas Woman's University	105	47	58	0
184 Tennessee Technological University	104	84	20	0
185 Baylor College of Medicine	103	103	0	144
186 Dartmouth College	102	102	0	20
187 De Paul University	102	83	19	0
188 University of Calif at Santa Cruz	100	100	0	12
189 South Dakota State University	98	94	4	3
190 St. Louis University	97	85	12	34
Total, 1st 190 insts.	92,091	79,748	12,343	11,435
191 Louisiana Tech University	96	82	14	0
192 Loma Linda University	96	71	25	9
193 Long Island University	95	72	23	0
194 Loyola University of Chicago	94	87	7	13
195 Cleveland State University	93	54	39	6
196 Nova University	93	78	15	0
197 University of New Hampshire	92	92	0	0
198 Memphis State University	88	65	23	2
199 University of Vermont & St Agric Colleg	84	78	6	35
200 Clark University	83	81	2	2
Total, 1st 200 insts.	93,005	80,508	12,497	11,502
201 Villanova University	83	71	12	0
202 Fordham University	79	64	15	0
203 University of Tulsa	79	55	24	0
204 Univ of Med and Dent of New Jersey	79	78	1	79
205 Claremont Univ Center & Graduate School	79	46	33	0
206 Illinois State University	79	70	9	0
207 East Texas State University	78	58	20	0
208 CUNY Hunter College	77	48	29	1
209 University of Calif at San Francisco	73	73	0	284
210 Medical College of Ohio at Toledo	72	66	6	11
Total, 1st 210 insts.	93,783	81,137	12,646	11,877
211 University of Alaska at Fairbanks	72	65	7	2
212 Ball State University	68	64	4	0
213 Yeshiva University	67	67	0	95
214 Georgia State University	64	57	7	11
215 Univ of Texas Med Branch at Galveston	63	63	0	63
216 University of Southern Mississippi	61	57	4	5
217 New York Medical College	61	30	31	29
218 College of William and Mary	61	61	0	6
219 CUNY Mt. Sinai Sch of Medicine	59	59	0	0
220 University of Montana	58	50	8	3
Total, 1st 220 insts.	94,417	81,710	12,707	12,091
221 Univ of Texas SW Medical Ctr at Dallas	56	56	0	111
222 University of South Alabama	56	49	7	8
223 Oregon Grad Inst of Science & Technolog	56	56	0	7
224 SUNY - Health Sci Ctr at Brooklyn	52	52	0	17
225 Northeastern University	52	37	15	19
226 Miami University	50	47	3	4
227 Fairleigh Dickinson University	50	37	13	0
228 New Mexico Institute of Mining and Tech	48	48	0	0
229 University of Nebraska Medical Center	47	42	5	25
230 Rockefeller University	45	45	0	120
Total, 1st 230 insts.	94,929	82,179	12,750	12,402
231 Baylor University	45	42	3	6
232 Adelphi University	44	32	12	1
233 Univ of Texas Hlth Sci Ctr San Antonio	44	44	0	75
234 University of Tennessee, Memphis	42	42	0	45
235 Duquesne University	40	26	14	0
236 Wesleyan University	37	37	0	3
237 Sam Houston State University	36	33	3	0
238 Oakland University	35	26	9	0
239 Alfred University	35	34	1	2
240 Northern Arizona University	33	29	4	0
Total, 1st 240 insts.	95,320	82,524	12,796	12,534

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Table I-7. Foreign graduate science/engineering enrollment by enrollment status and foreign postdoctorates in doctorate-granting institutions, ranked by foreign graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Foreign graduate students	Foreign full-time students	Foreign part-time students	Foreign postdoctorates
241 Maharishi International University	32	32	0	0
242 Union Institute	32	32	0	0
243 University of Dayton	31	22	9	1
244 Medical College of Georgia	30	27	3	40
245 University of Puerto Rico - Rio Piedras	30	28	2	4
246 Rush University	29	28	1	11
247 Calif Sch of Prof Psych-Berkeley/Alamed	28	24	4	0
248 SUNY - Health Sci Ctr at Syracuse	28	26	2	15
249 Uniformed Serv Univ of the Hlth Science	28	28	0	16
250 Oregon Health Sciences University	27	26	1	6
Total, 1st 250 insts.	95,615	82,797	12,818	12,627
251 Medical University of South Carolina	25	25	0	18
252 University of Health Sciences (Chicago)	24	24	0	8
253 Idaho State University	24	19	5	0
254 University of the Pacific	23	20	3	1
255 Mass College of Pharmacy/Allied Health	23	23	0	0
256 University of North Dakota	22	20	2	0
257 University of Maryland Eastern Shore	22	11	11	0
258 Air Force Institute of Technology	21	20	1	0
259 Hahnemann University	21	17	4	14
260 CUNY Herbert H. Lehman College	20	7	13	0
Total, 1st 260 insts.	95,840	82,983	12,857	12,668
261 East Carolina University	20	19	1	9
262 Northeast Louisiana University	20	20	0	0
263 Central Michigan University	19	15	4	0
264 US International University	19	9	10	0
265 The Medical College of Pennsylvania	18	17	1	23
266 Seton Hall University	17	13	4	0
267 Medical College of Wisconsin	17	17	0	38
268 Pace University	17	17	0	0
269 University of South Dakota	17	17	0	1
270 University of Northern Colorado	17	11	6	0
Total, 1st 270 insts.	96,021	83,138	12,883	12,739
271 Golden Gate University	16	7	9	0
272 University of Missouri - St Louis	16	5	11	9
273 Thomas Jefferson University	16	15	1	54
274 Mayo Graduate School	16	16	0	88
275 SUNY State College of Optometry	15	15	0	0
276 Calif Sch of Prof Psych - Los Angeles	15	14	1	0
277 Fuller Theological Seminary	14	12	2	0
278 Texas Christian University	13	13	0	8
279 Calif Sch of Prof Psych - San Diego	12	9	3	0
280 University of Nebraska - Omaha	12	10	2	0
Total, 1st 280 insts.	96,166	83,254	12,912	12,898
281 Hofstra University	11	8	3	0
282 Rand Graduate Institute Policy Studies	11	11	0	0
283 Stephen F. Austin State University	11	9	2	0
284 Wake Forest University	10	10	0	25
285 Marshall University	10	9	1	0
286 Biola University	10	7	3	0
287 Florida A & M University	10	9	1	4
288 Bryn Mawr College	9	2	7	0
289 Philadelphia Coll of Pharmacy and Sci	8	8	0	0
290 Antioch University	7	6	1	0
Total, 1st 290 insts.	96,263	83,333	12,930	12,927
291 University of Arkansas - Med Sci Campus	7	6	1	5
292 Center for Adv Studies on PR & Caribbea	7	7	0	0
293 Albany Medical Center Graduate School	6	6	0	1
294 Meharry Medical College	6	6	0	6
295 Union College(NY)	4	2	2	0
296 Oral Roberts University	4	4	0	0
297 Baylor College of Dentistry	4	2	2	0
298 Chicago School of Prof Psych	4	2	2	0
299 Institute of Paper Science & Technology	3	3	0	3
300 Creighton University	3	3	0	3
Total, 1st 300 insts.	96,311	83,374	12,937	12,945

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Table E-7. Foreign graduate science/engineering enrollment by enrollment status and foreign postdoctorates in doctorate-granting institutions, ranked by foreign graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Foreign graduate students	Foreign full-time students	Foreign part-time students	Foreign postdoctorates
301 University of Northern Iowa	3	3	0	0
302 Forest Institute of Prof Psych	2	2	0	0
303 University of Puerto Rico Med Sci Campu	2	2	0	1
304 Smith College	2	1	1	0
305 Mercer University	2	2	0	0
306 Xavier University	1	1	0	0
307 Eastern Virginia Medical School	1	1	0	13
308 Andrews University	1	1	0	0
309 Catholic University of Puerto Rico	1	1	0	0
310 Spalding University	0	0	0	0
Total, 1st 310 insts.	96,326	83,388	12,938	12,959
311 Univ. of Osteopathic Med & Health Sci	0	0	0	0
312 University of New England	0	0	0	0
313 East Tennessee State University	0	0	0	0
314 Providence College	0	0	0	0
315 Chicago Coll of Osteo Medicine	0	0	0	0
316 Univ of Texas MD Anderson Cancer Center	0	0	0	143
317 Institute of Textile Technology	0	0	0	0
318 Indiana University of Pennsylvania	0	0	0	0
319 Woods Hole Oceanographic Institution	0	0	0	2
320 University of Health Sciences (Kansas C	0	0	0	0
Total, 1st 320 insts.	96,326	83,388	12,938	13,104
321 Kirksville College of Osteopathic Med	0	0	0	0
322 Phila College of Osteopathic Medicine	0	0	0	0
323 The Wright Institute	0	0	0	0
324 Texas College of Osteopathic Medicine	0	0	0	8
325 West Virginia Sch of Osteopathic Med	0	0	0	0
326 Calif Sch of Prof Psych - Fresno	0	0	0	0
327 Morehouse School of Medicine	0	0	0	1
328 Ponce School of Medicine	0	0	0	0
329 Pacific Grad School of Prof Psych	0	0	0	0
330 California Institute of Integral Studie	0	0	0	0
Total, 1st 330 insts.	96,326	83,388	12,938	13,113
331 The Fielding Institute	0	0	0	0
332 Univ of North Carolina at Greensboro	0	0	0	0
333 NE Ohio Univ Med School	0	0	0	0
334 Charles R. Drew Univ of Medicine & Sci	0	0	0	0
Total, 1st 334 insts.	96,326	83,388	12,938	13,113

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-8. Full-time graduate science/engineering enrollment in doctorate-granting institutions by source of major support, ranked by full-time graduate science/engineering enrollment: 1989

Institutional ranking	Total full-time students	Federal Total	Non-Federal				
			Non-Federal total	Institutional 1/	Other U.S. support	Foreign support 2/	Self, loans, & family
Total, all institutions	267,554	56,712	140,288	115,191	18,905	6,192	70,554
1 University of Calif at Berkeley	5,057	1,665	1,862	1,534	312	16	1,530
2 University of Wisconsin - Madison	4,916	1,608	2,128	1,610	392	126	1,180
3 University of Minnesota	4,697	1,054	2,612	2,040	481	91	1,031
4 University of Illinois at Urbana	4,684	1,762	2,073	2,012	56	5	849
5 University of Michigan	4,533	940	2,529	2,014	336	179	1,064
6 Ohio State University	4,435	686	2,860	2,449	266	145	889
7 University of Calif at Los Angeles	4,345	1,261	1,697	1,352	267	78	1,387
8 Texas A & M University	3,928	552	2,451	2,084	279	88	925
9 Massachusetts Institute of Technology	3,913	1,724	1,888	952	766	170	301
10 Univ of Texas at Austin	3,847	653	2,191	1,737	413	41	1,003
Total, 1st 10 insts.	44,355	11,905	22,291	17,784	3,568	939	10,159
11 Stanford University	3,828	1,238	1,857	998	716	143	733
12 Purdue University	3,686	794	2,278	1,805	362	111	614
13 Cornell University	3,636	1,094	2,066	1,415	481	170	476
14 University of Southern California	3,426	694	1,681	1,156	295	230	1,051
15 University of Washington	3,278	1,188	1,303	940	320	43	787
16 Pennsylvania State University	3,141	827	1,783	1,388	323	72	531
17 Harvard University	2,938	917	1,440	1,089	166	185	581
18 University of Arizona	2,867	638	1,594	1,215	250	129	635
19 University of Colorado	2,838	802	1,057	786	140	131	979
20 Michigan State University	2,555	532	1,524	1,276	193	55	499
Total, 1st 20 insts.	76,548	20,629	38,874	29,852	6,814	2,208	17,045
21 University of Calif at Davis	2,530	404	1,640	1,238	346	56	486
22 Univ of North Carolina at Chapel Hill	2,514	815	1,165	1,012	123	30	534
23 North Carolina State Univ at Raleigh	2,484	519	1,465	1,201	188	76	500
24 Indiana University	2,440	416	1,229	1,084	104	41	795
25 Virginia Polytechnic Inst and State Uni	2,413	327	1,598	1,393	177	28	488
26 University of Maryland - College Park	2,309	597	1,271	1,106	139	26	441
27 University of Pennsylvania	2,298	740	851	681	119	51	707
28 University of Florida	2,291	432	1,590	1,200	378	12	269
29 Columbia University Main Division	2,289	603	941	739	183	19	745
30 Iowa State University of Sci & Tech	2,225	441	1,575	1,129	330	116	209
Total, 1st 30 insts.	100,341	25,923	52,199	40,635	8,901	2,663	22,219
31 Georgia Institute of Technology	2,100	369	1,207	925	195	87	524
32 Rutgers the State University	2,025	198	1,432	1,188	205	39	395
33 SUNY - Buffalo	2,017	454	920	775	119	26	643
34 University of Pittsburgh	2,010	450	1,196	927	100	169	364
35 University of Chicago	1,969	310	962	867	53	42	697
36 Louisiana State University System	1,913	279	1,249	1,125	88	36	385
37 Arizona State University	1,887	257	893	731	148	14	737
38 University of Illinois at Chicago	1,875	348	1,035	933	78	24	492
39 Northwestern University	1,838	526	885	640	168	77	427
40 CUNY Graduate School and Univ Center	1,816	219	833	752	75	6	764
Total, 1st 40 insts.	119,791	29,333	62,811	49,498	10,130	3,183	27,647
41 University of Iowa	1,785	388	1,032	915	89	28	365
42 Yale University	1,771	683	803	678	83	42	285
43 University of Connecticut	1,692	241	1,089	1,010	68	11	362
44 University of Tennessee at Knoxville	1,667	293	1,015	867	134	14	359
45 University of Cincinnati	1,651	246	1,347	1,212	115	20	58
46 SUNY - Stony Brook	1,646	482	845	777	44	24	319
47 Oregon State University	1,613	431	871	631	122	118	311
48 University of Calif at San Diego	1,590	586	937	791	140	6	67
49 Boston University	1,584	132	822	758	15	49	630
50 Wayne State University	1,581	171	759	621	116	22	651
Total, 1st 50 insts.	136,371	32,986	72,331	57,758	11,056	3,517	31,054
51 University of Massachusetts	1,566	430	921	758	160	3	215
52 University of Virginia	1,556	453	851	741	102	8	252
53 University of Hawaii at Manoa	1,539	478	659	548	75	36	402
54 Johns Hopkins University	1,487	512	784	653	91	40	191
55 New York University	1,467	261	774	696	44	34	432
56 University of Kentucky	1,442	272	910	740	123	47	260
57 University of Oklahoma	1,421	246	723	618	86	19	452
58 George Washington University	1,417	76	258	224	29	5	1,083
59 University of Calif at Santa Barbara	1,408	308	796	686	87	23	304
60 Colorado State University	1,397	249	746	534	32	180	402
Total, 1st 60 insts.	151,071	36,271	79,753	63,956	11,885	3,912	35,047

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Table E-8. Full-time graduate science/engineering enrollment in doctorate-granting institutions by source of major support, ranked by full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total full-time students	Federal Total	Non-Federal				
			Non-Federal total	Institutional 1/	Other U.S. support	Foreign support 2/	Self, loans, & family
61 University of Utah	1,377	530	571	450	100	21	276
62 Princeton University	1,325	488	806	583	168	55	31
63 University of Georgia	1,314	198	921	817	56	48	195
64 Rensselaer Polytechnic Institute	1,310	297	736	511	183	42	277
65 Kansas State University	1,308	147	901	673	121	107	260
66 New Jersey Institute of Technology	1,296	2	467	466	1	0	827
67 University of Missouri - Columbia	1,293	236	752	613	73	66	305
68 Auburn University	1,258	270	794	696	68	30	194
69 Syracuse University	1,235	161	732	604	79	49	342
70 Carnegie-Mellon University	1,218	417	755	458	251	46	46
Total, 1st 70 insts.	164,005	39,017	87,188	69,827	12,985	4,376	37,800
71 Southern Illinois Univ at Carbondale	1,218	125	859	775	41	43	234
72 University of Rochester	1,218	410	713	626	71	16	95
73 University of Houston-University Park	1,202	127	813	652	159	2	262
74 Duke University	1,201	365	676	587	57	32	160
75 US Naval Postgraduate School	1,182	1,182	0	0	0	0	0
76 University of Nebraska - Lincoln	1,169	126	743	621	87	35	300
77 University of South Carolina	1,163	286	651	565	67	19	226
78 Clemson University	1,158	124	906	719	187	0	128
79 Case Western Reserve University	1,137	359	496	273	161	62	282
80 University of Calif at Irvine	1,124	256	650	584	53	13	218
Total, 1st 80 insts.	175,777	42,377	93,695	75,229	13,868	4,598	39,705
81 Temple University	1,117	111	655	588	59	8	351
82 Washington University	1,104	347	557	444	92	21	200
83 Utah State University	1,085	266	471	399	33	39	348
84 Washington State University	1,085	205	785	671	60	54	95
85 California Institute of Technology	1,065	502	538	464	67	7	25
86 Florida State University	1,061	233	554	514	24	16	274
87 Nova University	1,060	14	82	81	1	0	964
88 Northeastern University	1,028	70	567	525	20	22	391
89 University of Calif at San Francisco	1,021	422	191	145	41	5	408
90 Texas Tech University	1,017	119	685	533	126	26	213
Total, 1st 90 insts.	186,420	44,666	98,780	79,593	14,391	4,796	42,974
91 The University of Alabama at Birmingham	1,008	351	407	357	36	14	250
92 University of New Mexico	1,002	210	390	321	51	18	402
93 University of Kansas	990	114	402	343	58	1	474
94 San Diego State University	961	192	294	268	17	9	475
95 University of Wisconsin - Milwaukee	960	101	519	495	23	1	340
96 Virginia Commonwealth University	957	180	425	366	24	35	352
97 West Virginia University	934	163	486	385	101	0	285
98 University of South Florida	930	165	437	397	34	6	328
99 Vanderbilt University	924	300	527	399	85	43	97
100 University of Miami	910	181	527	437	57	33	202
Total, 1st 100 insts.	195,996	46,623	103,194	83,361	14,877	4,956	46,179
101 University of North Texas	898	88	382	273	104	5	428
102 University of Akron	897	50	744	670	60	14	103
103 University of Delaware	878	147	636	506	129	1	95
104 University of Rhode Island	860	161	412	313	66	33	287
105 Tufts University	848	241	363	295	54	14	244
106 Ohio University	843	9	771	683	79	9	63
107 Mississippi State University	842	159	487	378	46	63	196
108 Tulane University of Louisiana	810	122	510	336	14	160	178
109 Univ of Texas at Arlington	808	72	427	285	142	0	309
110 Antioch University	797	0	0	0	0	0	797
Total, 1st 110 insts.	204,477	47,672	107,926	87,100	15,571	5,255	48,879
111 SUNY - Albany	760	101	510	469	25	16	149
112 Brown University	749	254	369	310	43	16	126
113 Rice University	739	215	400	262	125	13	124
114 Texas Woman's University	727	70	151	143	8	0	506
115 University of Notre Dame	717	145	496	420	67	9	76
116 Oklahoma State University	707	219	462	462	0	0	26
117 University of Oregon	704	162	311	287	18	6	231
118 Lehigh University	703	143	465	364	72	29	95
119 The American University	701	89	297	235	20	42	315
120 University of Lowell	693	57	403	380	21	2	233
Total, 1st 120 insts.	211,677	49,127	111,790	90,432	15,970	5,388	50,760

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Table E-8. Full-time graduate science/engineering enrollment in doctorate-granting institutions by source of major support, ranked by full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total full-time students	Federal Total	Non-Federal: Non-Federal total	Non-Federal: Institutional 1/	Non-Federal: Other U.S. support	Non-Federal: Foreign support 2/	Non-Federal: Self, loans & family
121 Northern Illinois University	679	70	475	440	25	10	134
122 University of Arkansas	679	74	519	437	60	22	86
123 University of Puerto Rico - Rio Piedras	671	171	193	183	10	0	307
124 Columbia University Teachers College	671	29	240	230	10	0	402
125 Emory University	650	87	373	349	14	10	190
126 The University of Alabama	649	72	464	410	50	4	113
127 University of Calif at Riverside	632	98	415	364	23	28	119
128 University of Wyoming	630	129	414	360	40	14	87
129 SUNY - Binghamton	627	43	423	410	13	0	161
130 Western Michigan University	616	14	268	253	11	4	334
Total, 1st 130 insts.	218,181	49,914	115,574	93,868	16,226	5,480	52,693
131 Georgia State University	616	58	206	198	7	1	352
132 University of Louisville	598	22	305	277	28	0	271
133 New Mexico State University	598	96	415	320	35	60	87
134 University of Missouri - Rolla	589	77	357	277	71	9	155
135 De Paul University	576	5	80	74	6	0	491
136 University of Mississippi	575	86	371	334	21	16	118
137 Kent State University	574	55	347	343	4	0	172
138 University of Calif at Santa Cruz	555	84	371	368	3	0	100
139 University of Nevada at Reno	555	88	253	211	41	1	214
140 Old Dominion University	550	142	238	223	12	3	170
Total, 1st 140 insts.	223,967	50,627	118,517	96,493	16,454	5,570	54,823
141 Air Force Institute of Technology	546	546	0	0	0	0	0
142 Yeshiva University	538	58	244	235	7	2	236
143 Drexel University	533	56	384	288	80	16	93
144 Georgetown University	531	68	160	140	12	8	303
145 Univ of Texas at Dallas	526	5	331	284	47	0	190
146 Illinois Institute of Technology	518	75	274	189	37	48	169
147 North Dakota State University	513	91	305	227	46	32	117
148 Stevens Institute of Technology	505	30	189	170	8	11	286
149 University of Maine at Orono	505	110	300	249	42	9	95
150 University of Idaho	505	138	265	199	52	14	102
Total, 1st 150 insts.	229,187	51,804	120,969	98,474	16,785	5,710	56,414
151 Union Institute	488	32	213	186	27	0	243
152 George Mason University	486	11	135	95	40	0	340
153 Univ of Texas Hlth Sci Ctr at Houston	482	220	93	63	30	0	169
154 Florida Institute of Technology	477	1	203	168	14	21	273
155 The Fielding Institute	470	0	0	0	0	0	470
156 Marquette University	470	35	273	238	32	3	162
157 University of Central Florida	469	14	225	208	17	0	230
158 University of Toledo	462	23	370	326	31	13	69
159 University of Vermont & St Agric Colleg	461	132	244	206	38	0	85
160 Montana State University	459	97	318	262	55	1	44
Total, 1st 160 insts.	233,911	52,369	123,043	100,226	17,069	5,748	58,499
161 University of Southern Mississippi	459	122	229	190	38	1	108
162 Memphis State University	456	29	315	309	6	0	112
163 Colorado School of Mines	455	59	242	122	59	61	154
164 University of Maryland - Baltimore Cnty	449	40	249	237	10	2	160
165 New School for Social Research	441	7	304	283	0	21	130
166 Bowling Green State University	440	11	395	375	20	0	34
167 University of New Hampshire	435	89	317	292	25	0	29
168 Calif Sch of Prof Psych-Berkeley/Alamed	431	1	3	3	0	0	427
169 University of Maryland - Balt Prof Sch	429	180	152	124	22	6	97
170 Howard University	427	64	276	193	80	3	87
Total, 1st 170 insts.	238,333	52,971	125,525	102,354	17,329	5,842	59,837
171 University of Denver	427	39	235	169	35	31	153
172 Northern Arizona University	419	29	183	175	6	2	207
173 Boston College	412	61	282	258	17	7	69
174 Wright State University	411	45	265	249	11	5	101
175 University of Southwestern Louisiana	401	19	247	229	12	6	135
176 Miami University	398	19	326	324	1	1	53
177 Brigham Young University	397	0	152	152	0	0	245
178 Loyola University of Chicago	397	38	218	209	7	2	141
179 New York Institute of Technology	396	0	44	39	5	0	352
180 Polytechnic University	396	70	158	101	49	8	168
Total, 1st 180 insts.	242,387	53,291	127,635	104,259	17,472	5,904	61,461

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Table E-8. Full-time graduate science/engineering enrollment in doctorate-granting institutions by source of major support, ranked by full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total full-time students	Federal Total	Non-Federal				
			Non-Federal total	Institutional 1/	Other U.S. support	Foreign support 2/	Self, loans & family
181 Brandeis University	391	111	253	244	5	4	27
182 Calif Sch of Prof Psych - Los Angeles	383	5	249	249	0	0	129
183 The University of Alabama in Huntsville	382	2	201	201	0	0	179
184 University of Missouri - Kansas City	380	29	115	107	8	0	236
185 Illinois State University	380	20	275	270	4	1	85
186 St. Louis University	370	118	142	127	9	6	110
187 Worcester Polytechnic Institute	370	44	227	135	79	13	99
188 Michigan Technological University	367	54	277	209	68	0	36
189 Univ of Texas at El Paso	365	47	221	196	20	5	97
190 University of Puerto Rico	360	28	222	214	2	6	110
Total, 1st 190 insts.	246,135	53,749	129,817	106,211	17,667	5,939	62,569
191 Portland State University	354	32	72	66	3	3	250
192 University of Montana	352	37	204	174	28	2	111
193 Dartmouth College	350	124	215	178	33	4	11
194 Calif Sch of Prof Psych - San Diego	349	2	2	2	0	0	345
195 University of Puerto Rico Med Sci Campu	347	71	84	69	14	1	192
196 University of Alaska at Fairbanks	346	133	143	123	20	0	70
197 Baylor University	339	119	192	159	30	3	28
198 Hahnemann University	339	25	41	33	7	1	273
199 Long Island University	331	12	98	71	1	26	221
200 Hofstra University	328	21	33	33	0	0	274
Total, 1st 200 insts.	249,570	54,325	130,901	107,119	17,803	5,979	64,344
201 Univ of North Carolina at Greensboro	318	20	141	141	0	0	157
202 Univ of Texas SW Medical Ctr at Dallas	317	145	111	79	32	0	61
203 Univ of Texas Hlth Sci Ctr San Antonio	312	145	113	101	9	3	54
204 Clarkson University	298	65	188	124	64	0	45
205 SUNY - Coll of Env Science and Forestry	297	44	136	87	42	7	117
206 Wichita State University	296	17	176	171	5	0	103
207 Cleveland State University	293	27	160	157	3	0	106
208 South Dakota State University	293	42	185	135	38	12	66
209 East Carolina University	281	25	215	212	3	0	41
210 Catholic University of America	278	46	143	109	9	25	89
Total, 1st 210 insts.	252,553	54,901	132,469	108,435	18,008	6,026	65,183
211 Adelphi University	278	16	178	117	61	0	84
212 University of North Dakota	272	21	196	172	24	0	55
213 St John's University	271	2	117	117	0	0	152
214 Fuller Theological Seminary	271	0	4	3	1	0	267
215 Rush University	270	97	78	71	6	1	95
216 Loma Linda University	267	53	93	79	8	6	121
217 Baylor College of Medicine	266	177	89	56	32	1	0
218 CUNY Hunter College	264	37	102	92	9	1	125
219 Univ of Med and Dent of New Jersey	259	41	194	157	33	4	24
220 CUNY City College	258	13	51	47	3	1	194
Total, 1st 220 insts.	255,229	55,358	133,571	109,346	18,185	6,040	66,300
221 Fordham University	256	6	128	122	6	0	122
222 Florida International University	255	54	113	104	8	1	88
223 Lamar University	255	39	118	81	23	14	98
224 College of William and Mary	251	64	175	171	3	1	12
225 Central Michigan University	244	5	145	126	19	0	94
226 Ball State University	234	4	171	169	2	0	59
227 University of Northern Colorado	226	0	94	94	0	0	132
228 University of South Alabama	221	4	102	90	12	0	115
229 Clark Atlanta University	219	90	64	27	17	20	65
230 New Mexico Institute of Mining and Tech	217	1	147	147	0	0	69
Total, 1st 230 insts.	257,607	55,625	134,828	110,477	18,275	6,076	67,154
231 Idaho State University	214	62	99	94	4	1	53
232 Indiana State University	213	15	146	134	9	3	52
233 US International University	209	12	110	100	10	0	87
234 Tennessee Technological University	207	0	191	191	0	0	16
235 Calif Sch of Prof Psych - Fresno	206	1	12	5	0	7	193
236 Clark University	206	21	169	144	18	7	16
237 Oakland University	200	0	99	70	29	0	101
238 Univ of Texas Med Branch at Galveston	198	47	104	78	26	0	47
239 Florida Atlantic University	197	1	129	126	3	0	67
240 Villanova University	195	9	126	118	6	2	60
Total, 1st 240 insts.	259,652	55,793	136,013	111,537	18,380	6,096	67,846

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Table E-8. Full-time graduate science/engineering enrollment in doctorate-granting institutions by source of major support, ranked by full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total full-time students	Federal Total	Non-Federal				
			Non-Federal total	Institutional 1/	Other U.S. support	Foreign support 2/	Self, loans & family
241 Louisiana Tech University	186	9	132	116	16	0	45
242 Fairleigh Dickinson University	185	0	24	24	0	0	161
243 Wake Forest University	185	20	165	161	2	2	0
244 Sam Houston State University	179	9	102	79	22	1	68
245 The Wright Institute	174	0	23	19	3	1	151
246 South Dakota School of Mines and Tech	171	16	131	99	13	19	24
247 Santa Clara University	167	7	35	26	9	0	125
248 University of Detroit	164	3	41	30	7	4	120
249 University of Dayton	163	11	124	116	2	6	28
250 East Texas State University	161	1	34	34	0	0	126
Total, 1st 250 insts.	261,387	55,869	136,824	112,241	18,454	6,129	68,694
251 University of Tulsa	160	11	117	87	30	0	32
252 Center for Adv Studies on PR & Caribbea	160	0	5	5	0	0	155
253 Forest Institute of Prof Psych	159	0	0	0	0	0	159
254 Northeast Louisiana University	157	0	141	141	0	0	16
255 University of Missouri - St Louis	156	4	65	62	3	0	87
256 University of South Dakota	151	10	106	88	17	1	35
257 Southern Methodist University	150	16	91	82	2	7	43
258 University of Tennessee, Memphis	148	65	72	63	8	1	11
259 Claremont Univ Center & Graduate School	147	0	72	23	16	33	75
260 Stephen F. Austin State University	147	1	90	85	5	0	56
Total, 1st 260 insts.	262,922	55,976	137,583	112,877	18,535	6,171	69,363
261 University of the Pacific	146	15	55	53	2	0	76
262 Duquesne University	143	0	57	57	0	0	86
263 Biola University	140	0	91	91	0	0	49
264 California Institute of Integral Studie	138	0	12	12	0	0	126
265 CUNY Mt. Sinai Sch of Medicine	135	48	87	66	19	2	0
266 Alfred University	129	3	116	85	31	0	10
267 Uniformed Serv Univ of the Hlth Science	126	83	22	0	16	6	21
268 Rockefeller University	121	41	80	62	18	0	0
269 University of Health Sciences (Chicago)	117	6	72	67	5	0	39
270 Pacific Grad School of Prof Psych	116	0	19	19	0	0	97
Total, 1st 270 insts.	264,233	56,172	138,194	113,389	18,626	6,179	69,867
271 Florida A & M University	115	20	54	46	8	0	41
272 Pace University	114	0	70	58	12	0	44
273 East Tennessee State University	114	6	86	82	4	0	22
274 Oregon Grad Inst of Science & Technolog	113	59	45	26	17	2	9
275 Marshall University	109	2	75	73	2	0	32
276 Wesleyan University	108	24	82	77	5	0	2
277 University of Nebraska - Omaha	108	6	61	61	0	0	41
278 University of Nebraska Medical Center	106	14	78	76	2	0	14
279 Andrews University	101	6	35	14	21	0	60
280 Medical College of Ohio at Toledo	101	13	83	83	0	0	5
Total, 1st 280 insts.	265,322	56,322	138,863	113,985	18,697	6,181	70,137
281 SUNY - Health Sci Ctr at Brooklyn	99	22	73	72	1	0	4
282 Texas Christian University	99	11	83	82	1	0	5
283 Albany Medical Center Graduate School	97	23	49	47	2	0	25
284 Medical College of Georgia	97	29	63	54	9	0	5
285 Medical University of South Carolina	94	13	75	68	3	4	6
286 New York Medical College	91	10	52	50	1	1	29
287 Thomas Jefferson University	82	16	64	62	0	2	2
288 Oregon Health Sciences University	82	49	33	14	19	0	0
289 University of Arkansas - Med Sci Campus	80	13	67	58	9	0	0
290 SUNY - Health Sci Ctr at Syracuse	79	6	72	62	10	0	1
Total, 1st 290 insts.	266,222	56,514	139,494	114,554	18,752	6,188	70,214
291 Chicago School of Prof Psych	76	0	0	0	0	0	76
292 The Medical College of Pennsylvania	74	23	35	26	6	3	16
293 Mayo Graduate School	74	2	72	71	1	0	0
294 Medical College of Wisconsin	73	36	34	30	4	0	3
295 Indiana University of Pennsylvania	71	2	65	50	15	0	4
296 University of Northern Iowa	69	2	44	41	3	0	23
297 Maharishi International University	68	0	56	56	0	0	12
298 Seton Hall University	66	26	36	33	3	0	4
299 Xavier University	65	6	57	57	0	0	2
300 Creighton University	63	24	33	30	3	0	6
Total, 1st 300 insts.	266,921	56,635	139,926	114,948	18,787	6,191	70,360

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Table E-8. Full-time graduate science/engineering enrollment in doctorate-granting institutions by source of major support, ranked by full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total full-time students	Federal Total	Non-Federal				
			Non-Federal total	Institutional 1/	Other U.S. support	Foreign support 2/	Self, loans & family
301 Rand Graduate Institute Policy Studies	60	0	60	0	60	0	0
302 Eastern Virginia Medical School	57	2	34	33	1	0	21
303 Catholic University of Puerto Rico	53	18	0	0	0	0	35
304 Institute of Paper Science & Technology	45	0	45	45	0	0	0
305 Bryn Mawr College	41	0	39	39	0	0	2
306 Baylor College of Dentistry	41	0	16	12	4	0	25
307 Union College(NY)	41	4	9	9	0	0	28
308 Philadelphia Coll of Pharmacy and Sci	40	0	35	27	7	1	5
309 Spalding University	38	3	3	3	0	0	32
310 Meharry Medical College	35	33	1	0	1	0	1
Total, 1st 310 insts.	267,372	56,695	140,168	115,116	18,860	6,192	70,509
311 Mass College of Pharmacy/Allied Health	34	1	23	21	2	0	10
312 Institute of Textile Technology	30	0	30	0	30	0	0
313 Golden Gate University	27	0	0	0	0	0	27
314 University of Maryland Eastern Shore	23	6	9	8	1	0	8
315 Ponce School of Medicine	17	7	10	10	0	0	0
316 Oral Roberts University	16	3	13	13	0	0	0
317 SUNY State College of Optometry	15	0	15	15	0	0	0
318 CUNY Herbert H. Lehman College	13	0	13	2	11	0	0
319 Smith College	4	0	4	4	0	0	0
320 Mercer University	3	0	3	2	1	0	0
Total, 1st 320 insts.	267,554	56,712	140,288	115,191	18,905	6,192	70,554
321 University of Health Sciences (Kansas C	0	0	0	0	0	0	0
322 Kirksville College of Osteopathic Med	0	0	0	0	0	0	0
323 University of New England	0	0	0	0	0	0	0
324 Woods Hole Oceanographic Institution	0	0	0	0	0	0	0
325 West Virginia Sch of Osteopathic Med	0	0	0	0	0	0	0
326 Providence College	0	0	0	0	0	0	0
327 Univ. of Osteopathic Med & Health Sci	0	0	0	0	0	0	0
328 Texas College of Osteopathic Medicine	0	0	0	0	0	0	0
329 Univ of Texas MD Anderson Cancer Center	0	0	0	0	0	0	0
330 Chicago Coll of Osteo Medicine	0	0	0	0	0	0	0
Total, 1st 330 insts.	267,554	56,712	140,288	115,191	18,905	6,192	70,554
331 NE Ohio Univ Med School	0	0	0	0	0	0	0
332 Phila College of Osteopathic Medicine	0	0	0	0	0	0	0
333 Morehouse School of Medicine	0	0	0	0	0	0	0
334 Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0	0	0
Total, 1st 334 insts.	267,554	56,712	140,288	115,191	18,905	6,192	70,554

1/ Including support from State and local governments.

2/ Excluding self-supported foreign students.

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-9. Full-time graduate science/engineering enrollment in doctorate-granting institutions receiving Federal support by agency source of major support, ranked by federally supported full-time graduate science/engineering enrollment: 1989

Institutional ranking	Federal total	Dep't of Agric.	Dep't of Defense	Dep't of HHS			NSF	Other Federal
				Total	NIH	Other HHS		
Total, all institutions	56,712	2,633	9,248	18,429	14,391	4,038	11,829	14,573
1 University of Illinois at Urbana	1,762	192	396	283	227	56	525	366
2 Massachusetts Institute of Technology	1,724	0	569	238	225	13	531	386
3 University of Calif at Berkeley	1,665	18	134	319	319	0	419	775
4 University of Wisconsin - Madison	1,608	211	107	558	502	56	390	342
5 University of Calif at Los Angeles	1,261	4	220	569	324	245	275	193
6 Stanford University	1,238	0	224	267	253	14	425	322
7 University of Washington	1,188	25	137	476	367	109	318	232
8 US Naval Postgraduate School	1,182	0	1,182	0	0	0	0	0
9 Cornell University	1,094	85	183	238	142	96	372	216
10 University of Minnesota	1,054	148	56	381	298	83	224	245
Total, 1st 10 insts.	13,776	683	3,208	3,329	2,657	672	3,479	3,077
11 University of Michigan	940	11	99	460	407	53	214	156
12 Harvard University	917	0	56	481	443	38	220	160
13 Pennsylvania State University	827	35	260	157	114	43	173	202
14 Univ of North Carolina at Chapel Hill	815	0	52	494	356	138	86	183
15 University of Colorado	802	0	38	316	174	142	203	245
16 Purdue University	794	64	98	201	185	16	268	163
17 University of Pennsylvania	740	0	82	356	347	9	199	103
18 University of Southern California	694	0	192	208	172	36	140	154
19 Ohio State University	686	33	84	221	194	27	215	133
20 Yale University	683	1	62	335	298	37	122	163
Total, 1st 20 insts.	21,674	827	4,231	6,558	5,347	1,211	5,319	4,739
21 Univ of Texas at Austin	653	6	145	122	118	4	174	206
22 University of Arizona	638	42	110	151	107	44	113	222
23 Columbia University Main Division	603	0	63	259	232	27	164	117
24 University of Maryland - College Park	597	96	125	44	43	1	151	181
25 University of Calif at San Diego	586	0	154	244	192	52	183	5
26 Texas A & M University	552	34	178	54	47	7	102	184
27 Air Force Institute of Technology	546	0	546	0	0	0	0	0
28 Michigan State University	532	94	27	167	157	10	137	107
29 University of Utah	530	0	76	194	140	54	93	167
30 Northwestern University	526	0	42	199	187	12	184	101
Total, 1st 30 insts.	27,437	1,099	5,697	7,992	6,570	1,422	6,620	6,029
31 North Carolina State Univ at Raleigh	519	52	117	87	78	9	111	152
32 Johns Hopkins University	512	0	41	349	295	54	87	35
33 California Institute of Technology	502	0	112	72	56	16	174	144
34 Princeton University	488	0	85	82	82	0	176	145
35 SUNY - Stony Brook	482	0	14	213	183	30	191	64
36 University of Hawaii at Manoa	478	42	21	78	22	56	68	269
37 SUNY - Buffalo	454	2	55	284	222	62	76	37
38 University of Virginia	453	0	133	184	154	30	76	60
39 University of Pittsburgh	450	0	34	249	164	85	72	95
40 Iowa State University of Sci & Tech	441	0	18	47	45	2	55	321
Total, 1st 40 insts.	32,216	1,195	6,327	9,637	7,871	1,766	7,706	7,351
41 University of Florida	432	48	85	123	115	8	62	114
42 Oregon State University	431	80	34	67	56	11	89	161
43 University of Massachusetts	430	49	62	137	101	36	108	74
44 University of Calif at San Francisco	422	0	10	374	189	185	32	6
45 Carnegie-Mellon University	417	0	157	47	47	0	139	74
46 Indiana University	416	0	25	174	137	37	81	136
47 University of Rochester	410	0	57	149	142	7	87	117
48 University of Calif at Davis	404	38	34	170	158	12	76	86
49 University of Iowa	388	6	33	223	182	41	56	70
50 Georgia Institute of Technology	369	2	164	46	31	15	62	95
Total, 1st 50 insts.	36,335	1,418	6,988	11,147	9,029	2,118	8,498	8,284
51 Duke University	365	4	27	184	180	4	77	73
52 Case Western Reserve University	359	0	38	189	179	10	53	79
53 The University of Alabama at Birmingham	351	0	26	277	131	146	22	26
54 University of Illinois at Chicago	348	0	32	184	83	101	68	64
55 Washington University	347	0	6	231	223	8	45	65
56 Virginia Polytechnic Inst and State Uni	327	35	95	13	13	0	69	115
57 University of Chicago	310	2	1	195	191	4	53	59
58 University of Calif at Santa Barbara	308	0	110	27	26	1	114	57
59 Vanderbilt University	300	0	15	176	149	27	33	76
60 Rensselaer Polytechnic Institute	297	1	108	21	21	0	75	92
Total, 1st 60 insts.	39,647	1,460	7,446	12,644	10,225	2,419	9,107	8,990

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Table E-9. Full-time graduate science/engineering enrollment in doctorate-granting institutions receiving Federal support by agency source of major support, ranked by federally supported full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Federal total	Dep't of Agric.	Dep't of Defense	Dep't of HHS			NSF	Other Federal
				Total	NIH	Other HHS		
61 University of Tennessee at Knoxville	293	64	7	64	40	24	24	134
62 University of South Carolina	286	0	24	158	106	52	54	50
63 Louisiana State University System	279	61	8	65	47	18	31	114
64 University of Kentucky	272	57	15	75	45	30	44	81
65 Auburn University	270	37	74	15	15	0	32	112
66 Utah State University	266	61	12	22	18	4	27	144
67 New York University	261	1	20	147	125	22	50	43
68 Arizona State University	257	0	34	68	12	56	91	64
69 University of Calif at Irvine	256	0	35	146	129	17	44	31
70 Brown University	254	1	54	52	48	4	77	70
Total, 1st 70 insts.	42,341	1,742	7,729	13,456	10,810	2,646	9,581	9,833
71 Colorado State University	249	25	25	57	52	5	68	74
72 University of Oklahoma	246	1	28	48	20	28	48	121
73 University of Cincinnati	246	0	22	110	83	27	19	95
74 University of Connecticut	241	22	28	68	53	15	45	78
75 Tufts University	241	21	9	158	158	0	24	29
76 University of Missouri - Columbia	236	36	9	85	46	39	36	70
77 Florida State University	233	2	42	39	33	6	56	94
78 Univ of Texas Hlth Sci Ctr at Houston	220	1	0	168	162	6	4	47
79 Oklahoma State University	219	88	0	0	0	0	0	131
80 CUNY Graduate School and Univ Center	219	0	8	100	99	1	26	85
Total, 1st 80 insts.	44,691	1,938	7,900	14,289	11,516	2,773	9,907	10,657
81 Rice University	215	2	9	35	32	3	87	82
82 University of New Mexico	210	0	21	56	42	14	42	91
83 Washington State University	205	34	17	50	46	4	28	76
84 University of Georgia	198	29	1	55	49	6	47	66
85 Rutgers the State University	198	7	25	74	63	11	61	31
86 San Diego State University	192	0	2	130	1	129	4	56
87 University of Miami	181	0	21	96	73	23	32	32
88 Virginia Commonwealth University	180	0	15	126	80	46	3	36
89 University of Maryland - Balt Prof Sch	180	0	43	134	39	95	1	2
90 Baylor College of Medicine	177	0	4	147	147	0	6	20
Total, 1st 90 insts.	46,627	2,010	8,058	15,192	12,088	3,104	10,218	11,149
91 Wayne State University	171	0	8	114	78	36	31	18
92 University of Puerto Rico - Rio Piedras	171	0	0	34	34	0	11	126
93 University of South Florida	165	0	53	52	47	5	18	42
94 West Virginia University	163	73	6	25	18	7	15	44
95 University of Oregon	162	0	18	57	57	0	66	21
96 Syracuse University	161	7	36	27	22	5	36	55
97 University of Rhode Island	161	14	23	28	17	11	42	54
98 Mississippi State University	159	16	16	2	2	0	3	122
99 Kansas State University	147	47	3	24	18	6	18	55
100 University of Delaware	147	14	29	8	3	5	56	40
Total, 1st 100 insts.	48,234	2,181	8,250	15,563	12,384	3,179	10,514	11,726
101 Univ of Texas SW Medical Ctr at Dallas	145	0	0	132	131	1	3	10
102 Univ of Texas Hlth Sci Ctr San Antonio	145	0	42	84	56	28	4	15
103 University of Notre Dame	145	1	16	25	19	6	56	47
104 Lehigh University	143	0	32	8	8	0	49	54
105 Old Dominion University	142	0	12	21	7	14	15	94
106 University of Idaho	138	27	1	5	5	0	18	87
107 University of Alaska at Fairbanks	133	7	3	2	2	0	30	91
108 Boston University	132	0	14	66	44	22	25	27
109 University of Vermont & St Agric Colleg	132	20	1	70	59	11	23	18
110 University of Wyoming	129	11	8	12	12	0	38	60
Total, 1st 110 insts.	49,618	2,247	8,379	15,988	12,727	3,261	10,775	12,229
111 University of Houston-University Park	127	0	25	28	28	0	25	49
112 University of Nebraska - Lincoln	126	28	10	16	14	2	31	41
113 Southern Illinois Univ at Carbondale	125	10	6	26	24	2	2	81
114 Clemson University	124	75	16	2	2	0	25	6
115 Dartmouth College	124	1	24	50	50	0	30	19
116 Tulane University of Louisiana	122	0	18	13	13	0	4	87
117 University of Southern Mississippi	122	1	43	21	1	20	7	50
118 Baylor University	119	0	116	0	0	0	0	3
119 Texas Tech University	119	3	35	28	19	9	27	26
120 St. Louis University	118	0	8	66	49	17	3	41
Total, 1st 120 insts.	50,844	2,365	8,680	16,238	12,927	3,311	10,929	12,632

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Table E-9. Full-time graduate science/engineering enrollment in doctorate-granting institutions receiving Federal support by agency source of major support, ranked by federally supported full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Federal total	Dep't of Agric.	Dep't of Defense	Dep't of HHS			NSF	Other Federal
				Total	NIH	Other HHS		
121 University of Kansas	114	0	3	77	55	22	19	15
122 Brandeis University	111	0	0	70	70	0	31	10
123 Temple University	111	0	3	73	67	6	9	26
124 University of Maine at Orono	110	40	2	9	9	0	26	33
125 University of Wisconsin - Milwaukee	101	0	12	26	18	8	12	51
126 SUNY - Albany	101	0	0	56	41	15	25	20
127 University of Calif at Riverside	98	4	3	36	35	1	26	29
128 Montana State University	97	13	4	15	12	3	23	42
129 Rush University	97	0	1	64	28	36	2	30
130 New Mexico State University	96	11	20	11	11	0	14	40
Total, 1st 130 insts.	51,880	2,433	8,728	16,675	13,273	3,402	11,116	12,928
131 North Dakota State University	91	36	10	12	10	2	14	19
132 Clark Atlanta University	90	1	26	35	35	0	3	25
133 The American University	89	1	13	8	5	3	7	60
134 University of New Hampshire	89	36	8	7	0	7	19	19
135 University of Nevada at Reno	88	13	0	15	14	1	18	42
136 University of North Texas	88	0	8	20	18	2	13	47
137 Emory University	87	0	9	59	52	7	10	9
138 University of Mississippi	86	5	3	34	16	18	20	24
139 University of Calif at Santa Cruz	84	0	5	11	10	1	42	26
140 Uniformed Serv Univ of the Hlth Science	83	0	51	5	5	0	0	27
Total, 1st 140 insts.	52,755	2,525	8,861	16,881	13,438	3,443	11,262	13,226
141 University of Missouri - Rolla	77	0	8	3	1	2	17	49
142 George Washington University	76	0	5	17	17	0	10	44
143 Illinois Institute of Technology	75	1	10	4	4	0	14	46
144 University of Arkansas	74	9	7	4	4	0	9	45
145 Univ of Texas at Arlington	72	0	24	32	8	24	10	6
146 The University of Alabama	72	2	6	24	22	2	15	25
147 University of Puerto Rico Med Sci Campu	71	0	0	42	20	22	14	15
148 Northern Illinois University	70	0	3	7	7	0	12	48
149 Northeastern University	70	1	5	32	29	3	22	10
150 Texas Woman's University	70	0	0	60	5	55	0	10
Total, 1st 150 insts.	53,482	2,538	8,929	17,106	13,555	3,551	11,385	13,524
151 Polytechnic University	70	0	36	5	5	0	25	4
152 Georgetown University	68	1	13	42	32	10	9	3
153 University of Tennessee, Memphis	65	0	1	62	35	27	2	0
154 Clarkson University	65	0	11	1	1	0	29	24
155 Howard University	64	0	11	27	27	0	5	21
156 College of William and Mary	64	0	3	0	0	0	16	45
157 Idaho State University	62	1	0	5	0	5	5	51
158 Boston College	61	0	7	46	15	31	6	2
159 Oregon Grad Inst of Science & Technolog	59	0	2	5	5	0	11	41
160 Colorado School of Mines	59	0	3	0	0	0	1	55
Total, 1st 160 insts.	54,119	2,540	9,016	17,299	13,675	3,624	11,494	13,770
161 Georgia State University	58	0	1	45	20	25	9	3
162 Yeshiva University	58	0	0	58	58	0	0	0
163 University of Lowell	57	0	15	26	0	26	3	13
164 Drexel University	56	0	14	7	7	0	20	15
165 Kent State University	55	0	7	2	2	0	13	33
166 Michigan Technological University	54	16	5	0	0	0	16	17
167 Florida International University	54	1	8	8	8	0	6	31
168 Loma Linda University	53	0	1	52	2	50	0	0
169 University of Akron	50	0	2	8	3	5	14	26
170 Oregon Health Sciences University	49	1	0	46	42	4	0	2
Total, 1st 170 insts.	54,663	2,558	9,069	17,551	13,817	3,734	11,575	13,910
171 CUNY Mt. Sinai Sch of Medicine	48	0	0	46	46	0	1	1
172 Univ of Texas Med Branch at Galveston	47	0	4	32	32	0	0	11
173 Univ of Texas at El Paso	47	0	6	13	12	1	11	17
174 Catholic University of America	46	0	14	16	6	10	3	13
175 Wright State University	45	0	11	9	1	8	1	24
176 Worcester Polytechnic Institute	44	0	9	8	8	0	23	4
177 SUNY - Coll of Env Science and Forestry	44	18	0	1	1	0	6	19
178 SUNY - Binghamton	43	0	1	16	1	15	11	15
179 South Dakota State University	42	12	0	5	0	5	0	25
180 Univ of Med and Dent of New Jersey	41	0	0	36	36	0	1	4
Total, 1st 180 insts.	55,110	2,588	9,114	17,733	13,960	3,773	11,632	14,043

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Table E-9. Full-time graduate science/engineering enrollment in doctorate-granting institutions receiving Federal support by agency source of major support, ranked by federally supported full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Federal total	Dep't of Agric.	Dep't of Defense	Dep't of HHS			NSF	Other Federal
				Total	NIH	Other HHS		
181 Rockefeller University	41	0	0	40	40	0	1	0
182 University of Maryland - Baltimore Cnty	40	0	12	19	14	5	1	8
183 Lamar University	39	0	0	0	0	0	0	39
184 University of Denver	39	0	3	20	2	18	4	12
185 Loyola University of Chicago	38	0	0	32	18	14	3	3
186 University of Montana	37	11	0	8	8	0	4	14
187 CUNY Hunter College	37	0	0	20	3	17	3	14
188 Medical College of Wisconsin	36	1	4	30	30	0	0	1
189 Marquette University	35	0	2	13	3	10	11	9
190 Meharry Medical College	33	0	0	31	26	5	2	0
Total, 1st 190 insts.	55,485	2,600	9,135	17,946	14,104	3,842	11,661	14,143
191 Union Institute	32	0	0	15	9	6	1	16
192 Portland State University	32	0	26	0	0	0	1	5
193 Stevens Institute of Technology	30	0	4	5	5	0	7	14
194 University of Missouri - Kansas City	29	0	6	18	13	5	1	4
195 Medical College of Georgia	29	0	0	17	4	13	0	12
196 Memphis State University	29	1	0	13	12	1	10	5
197 Columbia University Teachers College	29	0	0	25	17	8	3	1
198 Northern Arizona University	29	10	0	1	1	0	6	12
199 University of Puerto Rico	28	6	2	0	0	0	16	4
200 Cleveland State University	27	0	0	0	0	0	0	27
Total, 1st 200 insts.	55,779	2,617	9,173	18,040	14,165	3,875	11,706	14,243
201 Seton Hall University	26	0	0	24	0	24	0	2
202 East Carolina University	25	0	1	0	0	0	0	24
203 Hahnemann University	25	0	0	15	5	10	0	10
204 Creighton University	24	0	21	3	0	3	0	0
205 Wesleyan University	24	1	0	13	13	0	10	0
206 University of Toledo	23	0	0	1	1	0	2	20
207 Albany Medical Center Graduate School	23	0	0	23	23	0	0	0
208 The Medical College of Pennsylvania	23	0	0	20	18	2	2	1
209 University of Louisville	22	0	0	7	7	0	10	5
210 SUNY - Health Sci Ctr at Brooklyn	22	0	0	21	21	0	1	0
Total, 1st 210 insts.	56,016	2,618	9,195	18,167	14,253	3,914	11,731	14,305
211 Hofstra University	21	0	0	0	0	0	0	21
212 University of North Dakota	21	3	0	4	4	0	4	10
213 Clark University	21	1	2	3	3	0	10	5
214 Florida A & M University	20	1	0	7	5	2	0	12
215 Illinois State University	20	0	1	6	6	0	12	1
216 Univ of North Carolina at Greensboro	20	0	0	0	0	0	0	20
217 Wake Forest University	20	0	0	18	17	1	2	0
218 University of Southwestern Louisiana	19	0	0	0	0	0	9	10
219 Miami University	19	0	2	1	1	0	1	15
220 Catholic University of Puerto Rico	18	0	0	16	0	16	0	2
Total, 1st 220 insts.	56,215	2,623	9,200	18,222	14,289	3,933	11,769	14,401
221 Wichita State University	17	0	0	8	0	8	0	9
222 Thomas Jefferson University	16	0	0	3	0	3	1	12
223 Southern Methodist University	16	0	10	0	0	0	4	2
224 Adelphi University	16	0	0	13	0	13	2	1
225 South Dakota School of Mines and Tech	16	0	0	0	0	0	5	11
226 University of the Pacific	15	0	0	0	0	0	0	15
227 Indiana State University	15	0	0	13	7	6	1	1
228 Nova University	14	0	0	0	0	0	0	14
229 University of Central Florida	14	0	5	0	0	0	8	1
230 Western Michigan University	14	0	0	2	2	0	2	10
Total, 1st 230 insts.	56,368	2,623	9,215	18,261	14,298	3,963	11,792	14,477
231 University of Nebraska Medical Center	14	0	0	13	8	5	0	1
232 University of Arkansas - Med Sci Campus	13	0	0	13	0	13	0	0
233 Medical College of Ohio at Toledo	13	0	0	13	0	13	0	0
234 Medical University of South Carolina	13	0	0	13	13	0	0	0
235 CUNY City College	13	0	5	7	7	0	0	1
236 US International University	12	0	0	12	3	9	0	0
237 Long Island University	12	0	0	8	2	6	0	4
238 Texas Christian University	11	0	1	2	2	0	0	8
239 Bowling Green State University	11	0	5	1	1	0	2	3
240 University of Tulsa	11	0	0	2	2	0	9	0
Total, 1st 240 insts.	56,491	2,623	9,226	18,345	14,336	4,009	11,803	14,494

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Table E-9. Full-time graduate science/engineering enrollment in doctorate-granting institutions receiving Federal support by agency source of major support, ranked by federally supported full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Federal total	Dep't of Agric.	Dep't of Defense	Dep't of HHS			NSF	Other Federal
				Total	NIH	Other HHS		
241 University of Dayton	11	0	8	1	1	0	2	0
242 George Mason University	11	0	0	2	2	0	6	3
243 New York Medical College	10	0	0	10	10	0	0	0
244 University of South Dakota	10	0	2	1	0	1	1	6
245 Ohio University	9	0	0	2	2	0	0	7
246 Villanova University	9	0	1	4	4	0	1	3
247 Louisiana Tech University	9	0	0	0	0	0	2	7
248 Sam Houston State University	9	5	2	0	0	0	0	2
249 Ponce School of Medicine	7	0	0	7	7	0	0	0
250 Santa Clara University	7	0	0	0	0	0	4	3
Total, 1st 250 insts.	56,583	2,628	9,239	18,372	14,362	4,010	11,819	14,525
251 New School for Social Research	7	0	0	0	0	0	0	7
252 Andrews University	6	0	0	2	0	2	1	3
253 Fordham University	6	0	0	6	1	5	0	0
254 University of Health Sciences (Chicago)	6	0	0	6	4	2	0	0
255 University of Maryland Eastern Shore	6	2	0	0	0	0	1	3
256 University of Nebraska - Omaha	6	0	4	2	2	0	0	0
257 SUNY - Health Sci Ctr at Syracuse	6	0	0	4	4	0	0	2
258 East Tennessee State University	6	0	0	5	0	5	1	0
259 Xavier University	6	0	0	0	0	0	0	6
260 Calif Sch of Prof Psych - Los Angeles	5	0	0	5	5	0	0	0
Total, 1st 260 insts.	56,643	2,630	9,243	18,402	14,378	4,024	11,822	14,546
261 De Paul University	5	0	0	5	3	2	0	0
262 Univ of Texas at Dallas	5	0	0	0	0	0	0	5
263 Central Michigan University	5	0	0	0	0	0	0	5
264 Ball State University	4	0	0	0	0	0	1	3
265 Union College(NY)	4	0	0	4	0	4	0	0
266 University of South Alabama	4	0	0	0	0	0	1	3
267 University of Missouri - St Louis	4	0	0	3	2	1	0	1
268 Spalding University	3	0	0	3	0	3	0	0
269 University of Detroit	3	0	0	3	2	1	0	0
270 Alfred University	3	0	0	0	0	0	3	0
Total, 1st 270 insts.	56,683	2,630	9,243	18,420	14,385	4,035	11,827	14,563
271 Oral Roberts University	3	0	0	3	0	3	0	0
272 Eastern Virginia Medical School	2	0	1	1	1	0	0	0
273 Calif Sch of Prof Psych - San Diego	2	0	0	0	0	0	0	2
274 University of Northern Iowa	2	0	0	1	1	0	1	0
275 The University of Alabama in Huntsville	2	0	0	0	0	0	0	2
276 Marshall University	2	2	0	0	0	0	0	0
277 Mayo Graduate School	2	0	0	2	2	0	0	0
278 New Jersey Institute of Technology	2	0	2	0	0	0	0	0
279 St John's University	2	0	0	2	2	0	0	0
280 Indiana University of Pennsylvania	2	0	0	0	0	0	0	2
Total, 1st 280 insts.	56,704	2,632	9,246	18,429	14,391	4,038	11,828	14,569
281 New Mexico Institute of Mining and Tech	1	0	0	0	0	0	0	1
282 Stephen F. Austin State University	1	0	0	0	0	0	0	1
283 Calif Sch of Prof Psych-Berkeley/Alamed	1	0	0	0	0	0	0	1
284 East Texas State University	1	0	1	0	0	0	0	0
285 Calif Sch of Prof Psych - Fresno	1	0	0	0	0	0	0	1
286 Mass College of Pharmacy/Allied Health	1	0	1	0	0	0	0	0
287 Florida Atlantic University	1	0	0	0	0	0	1	0
288 Florida Institute of Technology	1	1	0	0	0	0	0	0
289 Kirksville College of Osteopathic Med	0	0	0	0	0	0	0	0
290 Morehouse School of Medicine	0	0	0	0	0	0	0	0
Total, 1st 290 insts.	56,712	2,633	9,248	18,429	14,391	4,038	11,829	14,573
291 Oakland University	0	0	0	0	0	0	0	0
292 Forest Institute of Prof Psych	0	0	0	0	0	0	0	0
293 Chicago School of Prof Psych	0	0	0	0	0	0	0	0
294 Woods Hole Oceanographic Institution	0	0	0	0	0	0	0	0
295 Pacific Grad School of Prof Psych	0	0	0	0	0	0	0	0
296 The Fielding Institute	0	0	0	0	0	0	0	0
297 Smith College	0	0	0	0	0	0	0	0
298 University of New England	0	0	0	0	0	0	0	0
299 NE Ohio Univ Med School	0	0	0	0	0	0	0	0
300 Brigham Young University	0	0	0	0	0	0	0	0
Total, 1st 300 insts.	56,712	2,633	9,248	18,429	14,391	4,038	11,829	14,573

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Table E-9. Full-time graduate science/engineering enrollment in doctorate-granting institutions receiving Federal support by agency source of major support, ranked by federally supported full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Federal total	Dep't of Agric.	Dep't of Defense	Dep't of HHS			NSF	Other Federal
				Total	NIH	Other HHS		
301 University of Health Sciences (Kansas C	0	0	0	0	0	0	0	0
302 California Institute of Integral Studie	0	0	0	0	0	0	0	0
303 Center for Adv Studies on PR & Caribbea	0	0	0	0	0	0	0	0
304 Maharishi International University	0	0	0	0	0	0	0	0
305 Rand Graduate Institute Policy Studies	0	0	0	0	0	0	0	0
306 SUNY State College of Optometry	0	0	0	0	0	0	0	0
307 Univ. of Osteopathic Med & Health Sci	0	0	0	0	0	0	0	0
308 Texas College of Osteopathic Medicine	0	0	0	0	0	0	0	0
309 The Wright Institute	0	0	0	0	0	0	0	0
310 Northeast Louisiana University	0	0	0	0	0	0	0	0
Total, 1st 310 insts.	56,712	2,633	9,248	18,429	14,391	4,038	11,829	14,573
311 Duquesne University	0	0	0	0	0	0	0	0
312 Antioch University	0	0	0	0	0	0	0	0
313 Pace University	0	0	0	0	0	0	0	0
314 Chicago Coll of Osteo Medicine	0	0	0	0	0	0	0	0
315 New York Institute of Technology	0	0	0	0	0	0	0	0
316 Phila College of Osteopathic Medicine	0	0	0	0	0	0	0	0
317 West Virginia Sch of Osteopathic Med	0	0	0	0	0	0	0	0
318 Philadelphia Coll of Pharmacy and Sci	0	0	0	0	0	0	0	0
319 Bryn Mawr College	0	0	0	0	0	0	0	0
320 Fairleigh Dickinson University	0	0	0	0	0	0	0	0
Total, 1st 320 insts.	56,712	2,633	9,248	18,429	14,391	4,038	11,829	14,573
321 Providence College	0	0	0	0	0	0	0	0
322 University of Northern Colorado	0	0	0	0	0	0	0	0
323 Mercer University	0	0	0	0	0	0	0	0
324 Tennessee Technological University	0	0	0	0	0	0	0	0
325 Golden Gate University	0	0	0	0	0	0	0	0
326 Fuller Theological Seminary	0	0	0	0	0	0	0	0
327 Claremont Univ Center & Graduate School	0	0	0	0	0	0	0	0
328 CUNY Herbert H. Lehman College	0	0	0	0	0	0	0	0
329 Biola University	0	0	0	0	0	0	0	0
330 Univ of Texas MD Anderson Cancer Center	0	0	0	0	0	0	0	0
Total, 1st 330 insts.	56,712	2,633	9,248	18,429	14,391	4,038	11,829	14,573
331 Institute of Paper Science & Technology	0	0	0	0	0	0	0	0
332 Institute of Textile Technology	0	0	0	0	0	0	0	0
333 Baylor College of Dentistry	0	0	0	0	0	0	0	0
334 Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0	0	0	0
Total, 1st 334 insts.	56,712	2,633	9,248	18,429	14,391	4,038	11,829	14,573

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-10. Full-time graduate science/engineering enrollment in doctorate-granting institutions by type of major support, ranked by full-time graduate science/engineering enrollment: 1989

Institutional ranking	Total full-time students	Fellowships	Traineeships	Research assistantships	Teaching assistantships	Other
Total, all institutions	267,554	23,815	13,994	77,425	62,198	90,122
1 University of Calif at Berkeley	5,057	725	299	1,642	776	1,615
2 University of Wisconsin - Madison	4,916	410	201	1,994	881	1,430
3 University of Minnesota	4,697	379	107	1,905	1,069	1,237
4 University of Illinois at Urbana	4,684	30	306	2,158	1,232	958
5 University of Michigan	4,533	718	348	1,216	966	1,285
6 Ohio State University	4,435	292	34	1,411	1,540	1,158
7 University of Calif at Los Angeles	4,345	612	396	983	688	1,666
8 Texas A & M University	3,928	276	127	1,440	806	1,279
9 Massachusetts Institute of Technology	3,913	821	138	1,944	476	534
10 Univ of Texas at Austin	3,847	421	79	1,126	1,108	1,113
Total, 1st 10 insts.	44,355	4,684	2,035	15,819	9,542	12,275
11 Stanford University	3,828	872	179	1,549	369	859
12 Purdue University	3,686	313	74	1,307	1,237	755
13 Cornell University	3,636	596	517	1,317	725	481
14 University of Southern California	3,426	194	179	746	686	1,621
15 University of Washington	3,278	204	280	1,192	639	963
16 Pennsylvania State University	3,141	133	46	1,361	814	787
17 Harvard University	2,938	932	563	564	183	696
18 University of Arizona	2,867	228	58	878	790	913
19 University of Colorado	2,838	182	213	718	493	1,232
20 Michigan State University	2,555	86	64	1,040	779	586
Total, 1st 20 insts.	76,548	8,424	4,208	26,491	16,257	21,168
21 University of Calif at Davis	2,530	189	35	802	666	838
22 Univ of North Carolina at Chapel Hill	2,514	167	296	838	595	618
23 North Carolina State Univ at Raleigh	2,484	105	35	1,026	716	602
24 Indiana University	2,440	232	78	429	751	950
25 Virginia Polytechnic Inst and State Uni	2,413	75	2	857	836	643
26 University of Maryland - College Park	2,309	235	0	733	723	618
27 University of Pennsylvania	2,298	433	248	534	302	781
28 University of Florida	2,291	59	60	1,577	273	322
29 Columbia University Main Division	2,289	295	154	694	293	853
30 Iowa State University of Sci & Tech	2,225	72	0	1,165	587	401
Total, 1st 30 insts.	100,341	10,286	5,116	35,146	21,999	27,794
31 Georgia Institute of Technology	2,100	113	11	973	363	640
32 Rutgers the State University	2,025	331	46	463	690	495
33 SUNY - Buffalo	2,017	120	100	564	547	686
34 University of Pittsburgh	2,010	157	112	551	505	685
35 University of Chicago	1,969	486	142	383	252	706
36 Louisiana State University System	1,913	144	19	714	597	439
37 Arizona State University	1,887	56	51	409	526	845
38 University of Illinois at Chicago	1,875	112	64	486	631	582
39 Northwestern University	1,838	398	74	536	285	545
40 CUNY Graduate School and Univ Center	1,816	213	13	379	251	960
Total, 1st 40 insts.	119,791	12,416	5,748	40,604	26,646	34,377
41 University of Iowa	1,785	74	139	571	604	397
42 Yale University	1,771	643	205	383	51	489
43 University of Connecticut	1,692	155	30	485	506	516
44 University of Tennessee at Knoxville	1,667	49	60	563	536	459
45 University of Cincinnati	1,651	66	116	522	390	557
46 SUNY - Stony Brook	1,646	31	80	573	632	330
47 Oregon State University	1,613	45	25	740	363	440
48 University of Calif at San Diego	1,590	203	109	683	437	158
49 Boston University	1,584	103	51	160	456	814
50 Wayne State University	1,581	118	48	246	417	752
Total, 1st 50 insts.	136,371	13,903	6,611	45,530	31,038	39,289
51 University of Massachusetts	1,566	80	63	617	571	235
52 University of Virginia	1,556	251	105	502	385	313
53 University of Hawaii at Manoa	1,539	192	88	391	267	601
54 Johns Hopkins University	1,487	220	311	174	219	563
55 New York University	1,467	288	118	264	302	495
56 University of Kentucky	1,442	186	73	469	419	295
57 University of Oklahoma	1,421	69	73	350	424	505
58 George Washington University	1,417	177	4	75	60	1,101
59 University of Calif at Santa Barbara	1,408	130	14	435	492	337
60 Colorado State University	1,397	44	15	399	357	582
Total, 1st 60 insts.	151,071	15,540	7,475	49,206	34,534	44,316

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Table E-10. Full-time graduate science/engineering enrollment in doctorate-granting institutions by type of major support, ranked by full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total full-time students	Fellow-ships	Trainee-ships	Research assis-tantships	Teaching assis-tantships	Other
61 University of Utah	1,377	116	74	510	333	344
62 Princeton University	1,325	202	440	425	181	77
63 University of Georgia	1,314	88	46	541	397	242
64 Rensselaer Polytechnic Institute	1,310	61	58	451	380	360
65 Kansas State University	1,308	44	11	538	305	410
66 New Jersey Institute of Technology	1,296	1	0	137	89	1,069
67 University of Missouri - Columbia	1,293	115	47	482	280	369
68 Auburn University	1,258	55	2	536	435	230
69 Syracuse University	1,235	109	9	260	421	436
70 Carnegie-Mellon University	1,218	287	198	509	176	48
Total, 1st 70 insts.	164,005	16,618	8,360	53,595	37,531	47,901
71 Southern Illinois Univ at Carbondale	1,218	99	60	320	434	305
72 University of Rochester	1,218	225	86	482	224	201
73 University of Houston-University Park	1,202	108	40	298	481	275
74 Duke University	1,201	367	152	195	272	215
75 US Naval Postgraduate School	1,182	0	0	0	0	1,182
76 University of Nebraska - Lincoln	1,169	21	2	435	339	372
77 University of South Carolina	1,163	27	103	405	377	251
78 Clemson University	1,158	35	0	675	279	169
79 Case Western Reserve University	1,137	69	87	478	123	380
80 University of Calif at Irvine	1,124	153	57	303	379	232
Total, 1st 80 insts.	175,777	17,722	8,947	57,186	40,439	51,483
81 Temple University	1,117	105	78	174	305	455
82 Washington University	1,104	57	210	357	172	308
83 Utah State University	1,085	67	35	431	153	399
84 Washington State University	1,085	18	26	416	470	155
85 California Institute of Technology	1,065	282	0	510	228	45
86 Florida State University	1,061	67	30	339	313	312
87 Nova University	1,060	1	0	0	0	1,059
88 Northeastern University	1,028	63	1	185	284	495
89 University of Calif at San Francisco	1,021	182	279	119	12	429
90 Texas Tech University	1,017	58	14	371	304	270
Total, 1st 90 insts.	186,420	18,622	9,620	60,088	42,680	55,410
91 The University of Alabama at Birmingham	1,008	72	312	178	61	385
92 University of New Mexico	1,002	70	47	225	216	444
93 University of Kansas	990	5	28	171	264	522
94 San Diego State University	961	22	129	137	176	497
95 University of Wisconsin - Milwaukee	960	11	92	90	368	399
96 Virginia Commonwealth University	957	120	75	116	188	458
97 West Virginia University	934	22	12	304	227	369
98 University of South Florida	930	31	10	277	245	367
99 Vanderbilt University	924	124	113	256	276	155
100 University of Miami	910	95	49	310	147	309
Total, 1st 100 insts.	195,996	19,194	10,487	62,152	44,848	59,315
101 University of North Texas	898	47	8	120	263	460
102 University of Akron	897	40	7	431	297	122
103 University of Delaware	878	121	2	329	298	128
104 University of Rhode Island	860	25	40	219	233	343
105 Tufts University	848	30	45	213	171	389
106 Ohio University	843	37	91	105	342	268
107 Mississippi State University	842	16	1	338	168	319
108 Tulane University of Louisiana	810	26	179	36	185	384
109 Univ of Texas at Arlington	808	11	28	109	250	410
110 Antioch University	797	0	0	0	0	797
Total, 1st 110 insts.	204,477	19,547	10,888	64,052	47,055	62,935
111 SUNY - Albany	760	117	2	154	299	188
112 Brown University	749	122	11	233	219	164
113 Rice University	739	37	238	305	13	146
114 Texas Woman's University	727	10	52	22	83	560
115 University of Notre Dame	717	124	4	234	231	124
116 Oklahoma State University	707	0	0	293	315	99
117 University of Oregon	704	16	30	154	263	241
118 Lehigh University	703	58	86	230	178	151
119 The American University	701	92	7	102	111	389
120 University of Lowell	693	10	26	56	367	234
Total, 1st 120 insts.	211,677	20,133	11,344	65,835	49,134	65,231

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Table E-10. Full-time graduate science/engineering enrollment in doctorate-granting institutions by type of major support, ranked by full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total full-time students	Fellow-ships	Trainee-ships	Research assis-tantships	Teaching assis-tantships	Other
121 Northern Illinois University	679	43	56	161	256	163
122 University of Arkansas	679	10	3	304	223	139
123 University of Puerto Rico - Rio Piedras	671	9	15	88	108	451
124 Columbia University Teachers College	671	18	85	51	65	452
125 Emory University	650	4	201	136	3	306
126 The University of Alabama	549	34	8	164	278	165
127 University of Calif at Riverside	632	31	58	184	211	148
128 University of Wyoming	630	25	7	255	236	107
129 SUNY - Binghamton	627	64	0	217	185	161
130 Western Michigan University	616	13	24	68	157	354
Total, 1st 130 insts.	218,181	20,384	11,801	67,463	50,856	67,677
131 Georgia State University	616	12	23	153	56	372
132 University of Louisville	598	44	8	91	163	292
133 New Mexico State University	598	15	9	153	258	163
134 University of Missouri - Rolla	589	62	2	170	192	163
135 De Paul University	576	3	3	5	57	508
136 University of Mississippi	575	62	24	241	111	137
137 Kent State University	574	5	0	51	323	195
138 University of Calif at Santa Cruz	555	63	0	121	271	100
139 University of Nevada at Reno	555	20	5	176	117	237
140 Old Dominion University	550	13	17	213	127	180
Total, 1st 140 insts.	223,967	20,683	11,892	68,837	52,531	70,024
141 Air Force Institute of Technology	546	0	0	0	0	546
142 Yeshiva University	538	16	186	9	25	302
143 Drexel University	533	45	17	127	243	101
144 Georgetown University	531	68	52	41	14	356
145 Univ of Texas at Dallas	526	16	0	91	193	226
146 Illinois Institute of Technology	518	17	43	116	165	177
147 North Dakota State University	513	38	9	190	139	137
148 Stevens Institute of Technology	505	4	0	49	150	302
149 University of Maine at Orono	505	27	3	215	145	115
150 University of Idaho	505	22	7	203	125	148
Total, 1st 150 insts.	229,187	20,936	12,209	69,878	53,730	72,434
151 Union Institute	488	18	22	46	110	292
152 George Mason University	486	0	0	100	46	340
153 Univ of Texas Hlth Sci Ctr at Houston	482	30	55	228	0	169
154 Florida Institute of Technology	477	0	0	60	116	301
155 The Fielding Institute	470	0	0	0	0	470
156 Marquette University	470	32	12	77	140	209
157 University of Central Florida	469	12	0	42	76	339
158 University of Toledo	462	9	12	107	243	91
159 University of Vermont & St Agric Colleg	461	39	35	150	150	87
160 Montana State University	459	5	4	198	204	48
Total, 1st 160 insts.	233,911	21,081	12,349	70,886	54,815	74,780
161 University of Southern Mississippi	459	13	20	133	136	157
162 Memphis State University	456	11	1	85	240	119
163 Colorado School of Mines	455	39	0	97	107	212
164 University of Maryland - Baltimore Cnty	449	17	0	83	168	181
165 New School for Social Research	441	103	8	21	18	291
166 Bowling Green State University	440	11	24	91	228	86
167 University of New Hampshire	435	9	3	117	243	63
168 Calif Sch of Prof Psych-Berkeley/Alamed	431	4	0	0	0	427
169 University of Maryland - Balt Prof Sch	429	38	98	108	18	167
170 Howard University	427	89	18	69	77	174
Total, 1st 170 insts.	238,333	21,415	12,521	71,690	56,050	76,657
171 University of Denver	427	31	13	36	96	251
172 Northern Arizona University	419	4	0	93	109	213
173 Boston College	412	17	28	69	160	138
174 Wright State University	411	37	54	89	111	120
175 University of Southwestern Louisiana	401	27	5	74	113	182
176 Miami University	398	37	3	111	175	72
177 Brigham Young University	397	0	22	41	62	272
178 Loyola University of Chicago	397	60	53	86	31	167
179 New York Institute of Technology	396	0	0	0	38	358
180 Polytechnic University	396	22	0	107	84	183
Total, 1st 180 insts.	242,387	21,650	12,699	72,396	57,029	78,613

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Table E-10. Full-time graduate science/engineering enrollment in doctorate-granting institutions by type of major support, ranked by full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total full-time students	Fellowships	Traineeships	Research assistantships	Teaching assistantships	Other
181 Brandeis University	391	153	51	84	73	30
182 Calif Sch of Prof Psych - Los Angeles	383	4	5	8	78	288
183 The University of Alabama in Huntsville	382	2	0	102	82	196
184 University of Missouri - Kansas City	380	7	5	37	76	255
185 Illinois State University	380	0	0	53	223	104
186 St. Louis University	370	43	41	67	51	168
187 Worcester Polytechnic Institute	370	17	0	102	124	127
188 Michigan Technological University	367	50	0	154	116	47
189 Univ of Texas at El Paso	365	29	17	53	131	135
190 University of Puerto Rico	360	2	0	111	135	112
Total, 1st 190 insts.	246,135	21,957	12,818	73,167	58,118	80,075
191 Portland State University	354	0	1	25	49	279
192 University of Montana	352	0	9	65	143	135
193 Dartmouth College	350	143	18	140	29	20
194 Calif Sch of Prof Psych - San Diego	349	2	0	0	1	346
195 University of Puerto Rico Med Sci Campu	347	3	71	21	0	252
196 University of Alaska at Fairbanks	346	43	1	124	81	97
197 Baylor University	339	14	0	39	89	197
198 Hahnemann University	339	26	15	11	11	276
199 Long Island University	331	8	10	24	33	256
200 Hofstra University	328	24	18	8	3	275
Total, 1st 200 insts.	249,570	22,220	12,961	73,624	58,557	82,208
201 Univ of North Carolina at Greensboro	318	0	0	126	35	157
202 Univ of Texas SW Medical Ctr at Dallas	317	35	34	163	13	72
203 Univ of Texas Hlth Sci Ctr San Antonio	312	24	48	34	93	113
204 Clarkson University	298	18	2	140	91	47
205 SUNY - Coll of Env Science and Forestry	297	11	1	107	61	117
206 Wichita State University	296	37	16	30	83	130
207 Cleveland State University	293	3	0	105	73	112
208 South Dakota State University	293	0	5	103	92	93
209 East Carolina University	281	42	27	54	115	43
210 Catholic University of America	278	51	20	20	69	118
Total, 1st 210 insts.	252,553	22,441	13,114	74,506	59,282	83,210
211 Adelphi University	278	19	13	14	77	155
212 University of North Dakota	272	5	1	38	153	75
213 St John's University	271	61	0	22	36	152
214 Fuller Theological Seminary	271	0	0	0	0	271
215 Rush University	270	26	22	47	0	175
216 Loma Linda University	267	55	58	5	11	138
217 Baylor College of Medicine	266	18	31	164	28	25
218 CUNY Hunter College	264	12	21	19	49	163
219 Univ of Med and Dent of New Jersey	259	110	8	81	30	30
220 CUNY City College	258	19	0	8	25	206
Total, 1st 220 insts.	255,229	22,766	13,268	74,904	59,691	84,600
221 Fordham University	256	14	1	45	65	131
222 Florida International University	255	3	4	72	64	112
223 Lamar University	255	11	30	32	36	146
224 College of William and Mary	251	12	1	146	58	34
225 Central Michigan University	244	18	0	18	86	122
226 Ball State University	234	0	1	0	173	60
227 University of Northern Colorado	226	44	9	11	30	132
228 University of South Alabama	221	29	18	35	12	127
229 Clark Atlanta University	219	23	9	60	11	116
230 New Mexico Institute of Mining and Tech	217	0	0	82	65	70
Total, 1st 230 insts.	257,607	22,920	13,341	75,405	60,291	85,650
231 Idaho State University	214	21	42	17	57	77
232 Indiana State University	213	29	4	46	58	76
233 US International University	209	12	9	36	48	104
234 Tennessee Technological University	207	3	0	102	86	16
235 Calif Sch of Prof Psych - Fresno	206	6	0	0	0	200
236 Clark University	206	27	4	37	86	52
237 Oakland University	200	0	0	45	53	102
238 Univ of Texas Med Branch at Galveston	198	23	10	113	0	52
239 Florida Atlantic University	197	0	0	7	23	167
240 Villanova University	195	4	1	57	65	68
Total, 1st 240 insts.	259,652	23,045	13,411	75,865	60,767	86,564

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Table E-10. Full-time graduate science/engineering enrollment in doctorate-granting institutions by type of major support, ranked by full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total full-time students	Fellow-ships	Trainee-ships	Research assis-tantships	Teaching assis-tantships	Other
241 Louisiana Tech University	186	7	0	31	69	79
242 Fairleigh Dickinson University	185	0	0	3	10	172
243 Wake Forest University	185	19	14	37	81	34
244 Sam Houston State University	179	20	0	21	37	101
245 The Wright Institute	174	4	0	6	8	156
246 South Dakota School of Mines and Tech	171	11	0	28	72	60
247 Santa Clara University	167	0	0	19	19	129
248 University of Detroit	164	0	0	17	15	132
249 University of Dayton	163	1	14	72	37	39
250 East Texas State University	161	0	0	31	0	130
Total, 1st 250 insts.	261,387	23,107	13,439	76,130	61,115	87,596
251 University of Tulsa	160	15	0	47	66	32
252 Center for Adv Studies on PR & Caribbea	160	1	0	4	0	155
253 Forest Institute of Prof Psych	159	0	0	0	0	159
254 Northeast Louisiana University	157	0	0	30	57	70
255 University of Missouri - St Louis	156	4	0	14	49	89
256 University of South Dakota	151	17	0	15	71	48
257 Southern Methodist University	150	10	1	28	63	48
258 University of Tennessee, Memphis	148	12	56	37	29	14
259 Claremont Univ Center & Graduate School	147	24	0	0	0	123
260 Stephen F. Austin State University	147	0	0	18	70	59
Total, 1st 260 insts.	262,922	23,190	13,496	76,323	61,520	88,393
261 University of the Pacific	146	1	6	0	40	99
262 Duquesne University	143	0	0	19	28	96
263 Biola University	140	0	0	0	0	140
264 California Institute of Integral Studie	138	0	0	0	12	126
265 CUNY Mt. Sinai Sch of Medicine	135	5	0	130	0	0
266 Alfred University	129	10	0	64	19	36
267 Uniformed Serv Univ of the Hlth Science	126	0	0	84	0	42
268 Rockefeller University	121	80	41	0	0	0
269 University of Health Sciences (Chicago)	117	4	46	8	0	59
270 Pacific Grad School of Prof Psych	116	1	0	9	9	97
Total, 1st 270 insts.	264,233	23,291	13,589	76,637	61,628	89,088
271 Florida A & M University	115	29	1	21	17	47
272 Pace University	114	0	0	0	1	113
273 East Tennessee State University	114	1	3	60	28	22
274 Oregon Grad Inst of Science & Technolog	113	2	0	102	0	9
275 Marshall University	109	1	6	25	29	48
276 Wesleyan University	108	2	0	30	74	2
277 University of Nebraska - Omaha	108	2	0	5	56	45
278 University of Nebraska Medical Center	106	14	7	47	14	24
279 Andrews University	101	3	5	2	8	83
280 Medical College of Ohio at Toledo	101	82	13	0	1	5
Total, 1st 280 insts.	265,322	23,427	13,624	76,929	61,856	89,486
281 SUNY - Health Sci Ctr at Brooklyn	99	13	5	14	61	6
282 Texas Christian University	99	12	8	4	13	62
283 Albany Medical Center Graduate School	97	11	11	0	44	31
284 Medical College of Georgia	97	0	16	55	0	26
285 Medical University of South Carolina	94	15	34	30	5	10
286 New York Medical College	91	62	0	0	0	29
287 Thomas Jefferson University	82	51	12	2	15	2
288 Oregon Health Sciences University	82	1	4	77	0	0
289 University of Arkansas - Med Sci Campus	80	0	71	0	0	9
290 SUNY - Health Sci Ctr at Syracuse	79	24	0	52	0	3
Total, 1st 290 insts.	266,222	23,616	13,785	77,163	61,994	89,664
291 Chicago School of Prof Psych	76	0	0	0	0	76
292 The Medical College of Pennsylvania	74	16	16	19	6	17
293 Mayo Graduate School	74	17	57	0	0	0
294 Medical College of Wisconsin	73	31	1	4	0	37
295 Indiana University of Pennsylvania	71	0	0	0	51	20
296 University of Northern Iowa	69	8	14	13	8	26
297 Maharishi International University	68	0	0	56	0	12
298 Seton Hall University	66	0	24	4	31	7
299 Xavier University	65	0	57	0	0	8
300 Creighton University	63	10	9	4	11	29
Total, 1st 300 insts.	266,921	23,698	13,963	77,263	62,101	89,896

Continued on next page.

Table E-10. Full-time graduate science/engineering enrollment in doctorate-granting institutions by type of major support, ranked by full-time graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total full-time students	Fellow-ships	Trainee-ships	Research assis-tantships	Teaching assis-tantships	Other
301 Rand Graduate Institute Policy Studies	60	0	0	60	0	0
302 Eastern Virginia Medical School	57	5	0	28	1	23
303 Catholic University of Puerto Rico	53	2	16	0	0	35
304 Institute of Paper Science & Technology	45	45	0	0	0	0
305 Bryn Mawr College	41	4	0	2	26	9
306 Baylor College of Dentistry	41	0	0	0	16	25
307 Union College(NY)	41	1	4	0	0	36
308 Philadelphia Coll of Pharmacy and Sci	40	8	1	10	16	5
309 Spalding University	38	0	3	3	0	32
310 Meharry Medical College	35	8	4	22	0	1
Total, 1st 310 insts.	267,372	23,771	13,991	77,388	62,160	90,062
311 Mass College of Pharmacy/Allied Health	34	1	0	6	14	13
312 Institute of Textile Technology	30	30	0	0	0	0
313 Golden Gate University	27	0	0	0	0	27
314 University of Maryland Eastern Shore	23	4	0	3	7	9
315 Ponce School of Medicine	17	7	0	7	3	0
316 Oral Roberts University	16	0	3	10	3	0
317 SUNY State College of Optometry	15	0	0	11	4	0
318 CUNY Herbert H. Lehman College	13	2	0	0	0	11
319 Smith College	4	0	0	0	4	0
320 Mercer University	3	0	0	0	3	0
Total, 1st 320 insts.	267,554	23,815	13,994	77,425	62,198	90,122
321 University of Health Sciences (Kansas C	0	0	0	0	0	0
322 Kirksville College of Osteopathic Med	0	0	0	0	0	0
323 University of New England	0	0	0	0	0	0
324 Woods Hole Oceanographic Institution	0	0	0	0	0	0
325 West Virginia Sch of Osteopathic Med	0	0	0	0	0	0
326 Providence College	0	0	0	0	0	0
327 Univ. of Osteopathic Med & Health Sci	0	0	0	0	0	0
328 Texas College of Osteopathic Medicine	0	0	0	0	0	0
329 Univ of Texas MD Anderson Cancer Center	0	0	0	0	0	0
330 Chicago Coll of Osteo Medicine	0	0	0	0	0	0
Total, 1st 330 insts.	267,554	23,815	13,994	77,425	62,198	90,122
331 NE Ohio Univ Med School	0	0	0	0	0	0
332 Phila College of Osteopathic Medicine	0	0	0	0	0	0
333 Morehouse School of Medicine	0	0	0	0	0	0
334 Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0	0
Total, 1st 334 insts.	267,554	23,815	13,994	77,425	62,198	90,122

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-11. Graduate science/engineering enrollment in doctorate-granting institutions ranked by total graduate science/engineering enrollment: 1983-89

Institutional ranking	1983	1984	1985	1986	1987	1988	1989
Total, all institutions	343,071	346,431	356,022	367,163	372,461	377,674	385,025
1 University of Southern California	8,058	7,046	8,051	7,866	7,474	7,034	6,375
2 University of Minnesota	5,109	5,223	5,595	5,524	5,320	5,479	5,607
3 University of Wisconsin - Madison	5,247	5,411	5,229	5,229	5,288	5,387	5,571
4 Ohio State University	4,664	4,575	4,739	5,050	5,102	5,198	5,164
5 University of Michigan	4,437	4,458	4,559	4,672	4,882	4,883	5,083
6 University of Calif at Berkeley	5,150	5,300	5,207	5,297	5,337	5,099	5,057
7 University of Illinois at Urbana	4,392	4,153	4,470	4,693	4,854	4,805	4,792
8 Texas A & M University	3,907	3,929	3,795	4,019	4,194	4,409	4,635
9 University of Calif at Los Angeles	4,198	4,107	4,214	4,201	4,270	4,356	4,442
10 Univ of Texas at Austin	4,465	4,464	4,641	4,688	4,390	4,420	4,436
Total, 1st 10 insts.	49,627	48,666	50,500	51,239	51,111	51,070	51,162
11 Pennsylvania State University	3,557	3,628	3,781	4,129	4,046	4,245	4,348
12 George Washington University	3,388	3,664	3,532	4,372	4,609	4,623	4,242
13 University of Washington	3,904	4,165	4,234	4,115	4,134	4,255	4,179
14 Stanford University	4,297	4,134	4,135	4,050	4,157	4,147	4,177
15 Rutgers the State University	4,159	3,985	4,034	4,163	4,036	4,018	4,093
16 Purdue University	4,293	3,556	3,622	3,725	3,851	4,058	4,040
17 Massachusetts Institute of Technology	4,013	3,996	4,045	4,065	3,962	3,951	4,032
18 University of Colorado	3,187	3,070	3,207	3,430	3,658	3,681	3,864
19 University of Maryland - College Park	3,196	3,333	3,439	3,515	3,592	3,684	3,860
20 Cornell University	3,113	3,141	3,211	3,523	3,531	3,561	3,636
Total, 1st 20 insts.	86,734	85,338	87,740	90,326	90,687	91,293	91,633
21 University of Pittsburgh	4,157	4,203	3,858	3,756	3,819	3,679	3,635
22 University of Arizona	3,276	3,435	3,582	3,752	3,631	3,629	3,474
23 Indiana University	2,362	2,411	1,869	2,513	2,630	2,659	3,473
24 University of Florida	2,849	3,049	3,244	3,305	3,223	3,293	3,371
25 Virginia Polytechnic Inst and State Uni	2,532	2,815	3,497	3,497	3,430	3,086	3,242
26 University of Massachusetts	2,369	2,458	2,596	2,669	2,616	3,178	3,130
27 SUNY - Buffalo	2,338	2,838	2,738	2,823	3,063	3,150	3,126
28 North Carolina State Univ at Raleigh	2,634	2,729	2,690	2,964	2,883	3,031	3,114
29 Harvard University	2,842	3,013	3,216	3,266	2,981	3,167	3,071
30 Michigan State University	3,003	2,897	2,868	3,087	2,947	2,845	3,051
Total, 1st 30 insts.	115,096	115,186	117,898	121,958	121,910	123,010	124,320
31 University of Illinois at Chicago	2,530	2,708	2,638	2,813	2,728	2,835	3,044
32 Wayne State University	2,149	2,255	2,333	2,491	2,482	2,624	2,979
33 Univ of North Carolina at Chapel Hill	2,427	2,393	2,426	2,539	2,692	2,669	2,963
34 Arizona State University	2,246	2,219	2,435	2,470	2,618	2,896	2,961
35 Columbia University Main Division	2,993	3,018	3,065	3,126	2,990	2,895	2,946
36 New York University	3,853	3,322	3,680	3,200	3,152	2,856	2,922
37 Georgia Institute of Technology	2,000	2,339	2,271	2,554	2,666	2,677	2,766
38 University of Tennessee at Knoxville	2,480	2,389	2,419	2,464	2,368	2,511	2,738
39 Iowa State University of Sci & Tech	2,597	2,491	2,578	2,619	2,659	2,714	2,680
40 University of Calif at Davis	2,557	2,571	2,662	2,744	2,608	2,587	2,668
Total, 1st 40 insts.	140,928	140,891	144,405	148,978	148,873	150,274	152,987
41 New Jersey Institute of Technology	918	1,655	1,907	2,102	2,419	2,658	2,647
42 University of Pennsylvania	2,573	2,436	2,523	2,510	2,437	2,415	2,521
43 University of Cincinnati	2,390	2,406	2,364	2,389	2,368	2,421	2,422
44 SUNY - Stony Brook	2,035	1,998	2,026	2,109	2,194	2,321	2,396
45 Syracuse University	2,227	2,292	2,108	2,188	2,138	2,195	2,383
46 University of Connecticut	2,004	1,966	2,025	2,163	2,270	2,282	2,348
47 Louisiana State University System	2,360	2,573	2,490	2,399	2,464	2,407	2,340
48 University of Oklahoma	2,077	2,094	2,165	2,181	2,364	2,225	2,270
49 Northeastern University	3,539	2,825	2,699	2,598	2,435	2,359	2,241
50 Boston University	2,121	2,096	2,241	2,359	2,361	2,211	2,229
Total, 1st 50 insts.	163,172	163,232	166,953	171,976	172,323	173,768	176,784
51 University of Kansas	2,387	2,215	2,124	2,049	2,041	2,091	2,191
52 University of Iowa	1,955	1,927	1,972	2,084	2,068	2,171	2,140
53 San Diego State University	1,624	1,586	1,885	1,893	1,992	1,960	2,100
54 Texas Woman's University	1,945	1,977	1,928	1,976	1,864	1,883	2,098
55 University of Houston-University Park	1,684	1,486	1,622	1,895	1,828	1,655	2,088
56 CUNY Graduate School and Univ Center	1,748	1,767	1,665	1,853	2,026	2,047	2,055
57 George Mason University	502	781	1,065	1,221	1,566	1,903	2,050
58 Polytechnic University	1,540	1,743	1,929	2,324	2,066	2,028	2,050
59 University of Chicago	1,421	1,427	1,503	1,625	1,741	1,757	1,969
60 Northwestern University	1,622	1,665	1,743	1,722	1,838	1,905	1,931
Total, 1st 60 insts.	179,600	179,806	184,389	190,618	191,353	193,168	197,456

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Table E-11. Graduate science/engineering enrollment in doctorate-granting institutions, ranked by total graduate science/engineering enrollment: 1983-89 -Continued

Institutional ranking	1983	1984	1985	1986	1987	1988	1989
61 Yale University	1,664	1,577	1,791	1,841	1,926	1,938	1,931
62 Univ of Texas at Arlington	1,621	1,787	1,806	1,858	1,874	1,882	1,910
63 University of South Carolina	1,661	1,671	1,620	1,829	1,895	1,708	1,892
64 Columbia University Teachers College	1,400	1,713	1,753	1,758	1,751	1,987	1,884
65 University of Kentucky	1,539	1,640	1,641	1,642	1,689	1,764	1,878
66 Colorado State University	1,807	1,734	1,722	1,756	1,804	1,870	1,864
67 University of Hawaii at Manoa	1,782	1,702	1,705	1,820	1,822	1,829	1,857
68 University of Missouri - Columbia	1,795	1,925	1,890	1,951	1,888	1,849	1,843
69 University of Utah	1,831	1,829	1,878	1,900	1,879	1,754	1,817
70 University of South Florida	1,046	986	1,155	1,304	1,259	1,688	1,817
Total, 1st 70 insts.	195,746	196,370	201,350	208,277	209,140	211,437	216,149
71 Rensselaer Polytechnic Institute	1,825	1,822	1,761	1,841	1,778	1,668	1,795
72 Oregon State University	1,657	1,732	1,673	1,797	1,779	1,740	1,761
73 Case Western Reserve University	1,779	1,848	1,921	1,947	2,243	1,986	1,758
74 University of Wisconsin - Milwaukee	1,671	1,620	1,628	1,630	1,691	1,698	1,709
75 University of Calif at San Diego	1,241	1,303	1,404	1,528	1,616	1,571	1,702
76 Johns Hopkins University	1,493	1,395	1,512	1,528	1,484	1,647	1,694
77 Oklahoma State University	1,479	1,427	1,439	1,529	1,577	1,542	1,690
78 University of Virginia	1,539	1,631	1,763	1,848	1,877	1,846	1,666
79 Carnegie-Mellon University	1,144	1,198	1,419	1,535	1,512	1,563	1,609
80 Southern Illinois Univ at Carbondale	1,288	1,289	1,433	1,512	1,656	1,624	1,599
Total, 1st 80 insts.	210,862	211,635	217,303	224,972	226,353	228,322	233,132
81 Santa Clara University	1,310	1,422	1,580	1,665	1,619	1,642	1,591
82 University of Lowell	1,408	1,738	1,805	1,932	2,151	2,088	1,582
83 Temple University	1,223	1,242	1,242	1,158	1,203	1,237	1,565
84 Kansas State University	1,331	1,377	1,345	1,409	1,450	1,505	1,533
85 University of Akron	1,132	1,225	1,337	1,398	1,448	1,505	1,526
86 University of New Mexico	1,540	1,456	1,533	1,556	1,665	1,623	1,514
87 Illinois Institute of Technology	1,784	1,745	1,781	1,583	1,632	1,654	1,510
88 Virginia Commonwealth University	969	974	998	1,168	1,305	1,419	1,507
89 University of Georgia	1,532	1,555	1,436	1,465	1,576	1,525	1,501
90 Auburn University	984	1,098	1,227	1,303	1,340	1,391	1,496
Total, 1st 90 insts.	224,075	225,467	231,587	239,609	241,742	243,911	248,457
91 The American University	1,459	1,442	1,720	1,600	1,645	1,371	1,476
92 Clemson University	1,119	1,173	1,224	1,311	1,333	1,396	1,458
93 University of Nebraska - Lincoln	1,462	1,431	1,359	1,351	1,407	1,415	1,457
94 University of Calif at Santa Barbara	1,218	1,344	1,347	1,368	1,401	1,328	1,440
95 The University of Alabama at Birmingham	878	897	980	1,120	1,270	1,395	1,438
96 Washington University	1,068	1,038	1,080	1,200	1,325	1,377	1,437
97 Stevens Institute of Technology	1,084	1,455	1,573	1,622	1,642	1,666	1,435
98 Florida State University	1,216	1,112	1,137	1,190	1,110	1,219	1,425
99 De Paul University	1,005	969	1,159	1,191	1,295	1,273	1,400
100 West Virginia University	1,517	1,498	1,412	1,339	1,242	1,352	1,396
Total, 1st 100 insts.	236,101	237,826	244,578	252,901	255,412	257,703	262,819
101 University of Rochester	1,098	1,169	1,224	1,271	1,276	1,334	1,376
102 Western Michigan University	1,161	1,282	1,253	1,345	1,540	1,392	1,342
103 Princeton University	1,123	1,137	1,164	1,177	1,182	1,248	1,327
104 Nova University	436	476	720	436	1,289	1,267	1,324
105 Duke University	961	976	1,060	1,166	1,216	1,283	1,299
106 University of Rhode Island	1,102	1,091	1,126	1,196	1,286	1,217	1,278
107 Drexel University	1,102	1,208	1,336	1,362	1,391	1,318	1,276
108 Long Island University	1,945	1,996	1,500	1,655	1,534	1,537	1,260
109 Utah State University	1,065	1,207	1,078	1,207	1,163	1,213	1,247
110 University of Missouri - Rolla	1,068	1,095	1,159	1,246	1,282	1,239	1,231
Total, 1st 110 insts.	247,162	249,463	256,198	264,962	268,571	270,751	275,779
111 University of North Texas	1,274	1,400	1,244	1,202	1,158	1,218	1,221
112 University of Delaware	1,180	1,112	1,150	1,189	1,303	1,198	1,218
113 Pace University	1,666	1,153	1,079	1,375	1,223	1,164	1,217
114 University of Calif at Irvine	868	931	992	1,027	1,109	1,161	1,200
115 SUNY - Binghamton	1,126	1,137	1,159	1,131	1,106	1,161	1,199
116 Washington State University	1,367	1,411	1,440	1,398	1,362	1,276	1,191
117 University of Louisville	1,149	1,087	1,000	1,009	1,079	1,168	1,186
118 Old Dominion University	991	931	906	950	986	1,091	1,184
119 US Naval Postgraduate School	1,266	1,171	1,302	1,260	1,204	1,331	1,182
120 Univ of Texas at Dallas	842	898	946	963	975	1,088	1,169
Total, 1st 120 insts.	258,891	260,694	267,416	276,466	280,076	282,607	287,746

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Table E-11. Graduate science/engineering enrollment in doctorate-granting institutions, ranked by total graduate science/engineering enrollment: 1983-89 -Continued

Institutional ranking	1983	1984	1985	1986	1987	1988	1989
121 Texas Tech University	1,089	1,140	1,143	1,071	1,077	1,044	1,167
122 University of Miami	1,025	1,025	1,110	1,085	1,180	1,200	1,157
123 University of Puerto Rico - Rio Piedras	1,105	1,239	1,263	1,265	1,135	1,041	1,116
124 Mississippi State University	973	1,014	949	927	1,044	1,075	1,090
125 SUNY - Albany	843	843	1,123	1,153	1,168	1,077	1,088
126 Tufts University	571	668	765	744	918	1,049	1,070
127 Georgia State University	952	1,025	884	926	928	984	1,068
128 New School for Social Research	1,430	1,328	1,273	1,135	1,103	1,080	1,066
129 California Institute of Technology	946	995	998	992	965	1,010	1,065
130 Cleveland State University	964	993	989	940	1,008	1,104	1,060
Total, 1st 130 insts.	268,789	270,964	277,913	286,704	290,602	293,271	298,693
131 University of Central Florida	814	971	1,062	1,113	1,151	1,052	1,047
132 University of Calif at San Francisco	876	856	873	949	994	1,033	1,037
133 Florida Institute of Technology	928	954	1,025	1,053	1,103	999	1,024
134 Antioch University	965	0	0	0	0	1,133	1,019
135 Lehigh University	963	932	964	1,017	944	974	1,018
136 Vanderbilt University	682	709	753	739	795	839	1,001
137 Ohio University	864	1,007	897	930	998	1,000	986
138 Worcester Polytechnic Institute	932	1,045	1,047	1,114	1,016	1,035	984
139 Northern Illinois University	906	830	829	883	905	973	978
140 New York Institute of Technology	664	949	898	928	884	948	961
Total, 1st 140 insts.	277,383	279,217	286,261	295,430	299,392	303,257	308,748
141 Kent State University	794	842	880	899	901	911	961
142 Wright State University	677	701	743	759	861	921	961
143 University of Idaho	771	776	775	778	837	887	960
144 Southern Methodist University	892	802	736	770	895	974	952
145 Tulane University of Louisiana	941	850	893	905	893	931	947
146 Adelphi University	1,018	1,067	1,012	971	902	871	943
147 University of Arkansas	980	984	971	943	958	858	940
148 The University of Alabama in Huntsville	334	517	609	627	742	826	940
149 University of Maryland - Balt Prof Sch	749	743	716	819	812	827	921
150 Catholic University of America	1,035	1,081	1,081	1,037	1,032	980	916
Total, 1st 150 insts.	285,574	287,580	294,677	303,938	308,225	312,243	318,189
151 University of Missouri - Kansas City	620	518	629	718	866	745	908
152 Villanova University	1,016	982	1,001	1,061	979	958	902
153 Georgetown University	990	874	1,251	1,259	1,022	884	886
154 Wichita State University	709	775	756	772	896	905	881
155 Fairleigh Dickinson University	1,275	1,241	1,252	794	1,027	993	859
156 New Mexico State University	802	792	793	843	900	903	856
157 Emory University	513	709	704	743	752	769	852
158 CUNY Hunter College	755	833	913	843	786	774	844
159 University of Maryland - Baltimore Cnty	358	396	419	563	507	831	835
160 Univ of Texas Hlth Sci Ctr at Houston	644	670	655	690	703	749	832
Total, 1st 160 insts.	293,256	295,370	303,050	312,224	316,663	320,754	326,844
161 Portland State University	521	573	630	676	692	778	815
162 Marquette University	639	631	708	764	828	819	814
163 Northern Arizona University	625	558	726	612	689	729	804
164 St. Louis University	804	817	776	779	744	777	804
165 University of Wyoming	835	779	813	740	739	697	802
166 Rice University	689	740	757	795	840	750	789
167 Brown University	749	743	757	797	788	801	785
168 University of Oregon	779	762	757	740	754	794	776
169 University of Dayton	543	576	654	806	947	830	775
170 The University of Alabama	617	641	682	734	775	714	768
Total, 1st 170 insts.	300,057	302,190	310,310	319,667	324,459	328,443	334,776
171 Memphis State University	829	865	943	979	820	721	767
172 University of Nevada at Reno	532	561	547	536	642	647	762
173 University of Notre Dame	663	672	667	658	672	755	756
174 University of Mississippi	540	580	566	640	601	709	756
175 Florida International University	27	0	0	0	0	581	718
176 CUNY City College	928	710	762	1,059	896	894	716
177 Brigham Young University	887	885	1,030	1,047	1,001	883	707
178 Oakland University	402	478	559	602	622	652	701
179 Univ of Texas at El Paso	644	777	737	676	703	738	701
180 Colorado School of Mines	582	442	616	803	774	700	679
Total, 1st 180 insts.	306,091	308,160	316,737	326,667	331,190	335,723	342,039

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Table E-11. Graduate science/engineering enrollment in doctorate-granting institutions, ranked by total graduate science/engineering enrollment: 1983-89 -Continued

Institutional ranking	1983	1984	1985	1986	1987	1988	1989
181 University of Calif at Riverside	744	732	769	727	735	701	672
182 University of Maine at Orono	509	580	523	538	614	649	667
183 Yeshiva University	538	552	599	561	586	600	666
184 University of Toledo	658	765	786	729	726	583	666
185 University of Denver	756	771	731	663	652	691	664
186 University of Southern Mississippi	488	606	657	683	610	605	661
187 Howard University	831	1,059	947	842	896	868	656
188 University of New Hampshire	502	518	536	570	584	634	634
189 North Dakota State University	581	555	589	614	574	620	618
190 University of Vermont & St Agric Colleg	634	661	618	630	605	650	618
Total, 1st 190 insts.	312,332	314,959	323,492	333,224	337,772	342,324	348,561
191 Golden Gate University	139	775	691	593	847	754	618
192 Boston College	481	498	511	523	521	538	614
193 Loyola University of Chicago	617	625	562	561	580	587	608
194 University of Puerto Rico Med Sci Campu	471	404	453	411	460	558	601
195 Hofstra University	386	350	516	507	553	580	599
196 University of Detroit	541	530	503	540	579	526	588
197 St John's University	753	654	610	698	639	641	569
198 Illinois State University	466	442	465	449	541	557	567
199 Bowling Green State University	475	515	487	509	536	589	563
200 University of Calif at Santa Cruz	375	403	433	455	462	455	555
Total, 1st 200 insts.	317,036	320,155	328,723	338,470	343,490	348,109	354,443
201 Air Force Institute of Technology	583	639	551	524	580	596	548
202 University of Southwestern Louisiana	656	684	693	633	560	490	534
203 Montana State University	508	493	510	476	461	520	515
204 Claremont Univ Center & Graduate School	229	205	207	448	480	517	502
205 Calif Sch of Prof Psych - Los Angeles	266	330	424	428	438	452	501
206 Calif Sch of Prof Psych-Berkeley/Alamed	300	361	391	426	423	455	501
207 US International University	610	513	540	630	613	547	497
208 Florida Atlantic University	555	438	446	475	499	512	490
209 Union Institute	288	293	444	470	476	471	488
210 Rush University	115	330	342	376	394	434	487
Total, 1st 210 insts.	321,146	324,441	333,271	343,356	348,414	353,103	359,506
211 SUNY - Coll of Env Science and Forestry	431	382	384	418	399	429	482
212 Calif Sch of Prof Psych - San Diego	322	389	401	415	430	434	480
213 University of Nebraska - Omaha	462	423	418	454	474	521	473
214 University of Northern Colorado	79	133	192	456	552	419	471
215 The Fielding Institute	380	436	449	447	471	434	470
216 Fordham University	579	633	598	480	543	461	470
217 Loma Linda University	649	512	649	537	453	489	464
218 University of Montana	511	537	470	435	430	421	456
219 Miami University	536	494	521	505	546	477	454
220 University of South Alabama	229	229	261	305	345	392	453
Total, 1st 220 insts.	325,324	328,609	337,614	347,808	353,057	357,580	364,179
221 Univ of North Carolina at Greensboro	511	517	503	500	494	451	447
222 Idaho State University	233	232	266	257	336	338	445
223 University of Alaska at Fairbanks	424	352	381	399	387	404	444
224 Univ of Texas Hlth Sci Ctr San Antonio	251	281	277	292	302	309	443
225 Michigan Technological University	319	350	334	383	398	417	442
226 South Dakota State University	397	386	432	431	431	429	437
227 Baylor University	191	254	304	289	289	340	430
228 Hahnemann University	257	284	282	391	394	494	406
229 Brandeis University	318	314	311	342	366	375	392
230 East Carolina University	443	448	374	373	354	364	382
Total, 1st 230 insts.	328,668	332,027	341,078	351,465	356,808	361,501	368,447
231 East Texas State University	645	505	501	481	36	348	377
232 University of Puerto Rico	310	395	415	427	397	374	364
233 Indiana State University	255	282	282	297	311	302	352
234 Dartmouth College	292	285	293	308	298	339	352
235 Pacific Grad School of Prof Psych	178	172	182	213	246	0	347
236 Ball State University	570	518	473	477	573	328	333
237 University of North Dakota	365	351	360	356	341	327	332
238 Sam Houston State University	445	373	352	376	391	373	328
239 Lamar University	289	334	304	330	282	303	320
240 East Tennessee State University	224	193	206	241	262	356	318
Total, 1st 240 insts.	332,241	335,435	344,446	354,971	359,945	364,551	371,870

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Table E-11. Graduate science/engineering enrollment in doctorate-granting institutions, ranked by total graduate science/engineering enrollment: 1983-89 -Continued

Institutional ranking	1983	1984	1985	1986	1987	1988	1989
241 Univ of Texas SW Medical Ctr at Dallas	249	260	265	276	257	300	318
242 Duquesne University	314	303	283	306	315	299	314
243 University of Missouri - St Louis	300	284	274	323	303	309	313
244 Central Michigan University	449	393	397	399	363	316	312
245 Clark Atlanta University	0	0	0	0	0	0	312
246 Clarkson University	303	337	343	348	319	320	308
247 College of William and Mary	285	291	293	314	303	310	302
248 California Institute of Integral Studie	159	89	184	208	240	247	300
249 Fuller Theological Seminary	172	180	176	186	245	280	295
250 New York Medical College	264	359	380	344	386	391	290
Total, 1st 250 insts.	334,736	337,931	347,041	357,675	362,676	367,323	374,934
251 Tennessee Technological University	174	185	193	233	267	264	285
252 Medical College of Ohio at Toledo	46	42	171	162	214	222	285
253 Univ of Med and Dent of New Jersey	228	229	223	243	269	308	285
254 Seton Hall University	366	319	322	300	297	313	278
255 South Dakota School of Mines and Tech	223	228	209	202	232	236	274
256 Baylor College of Medicine	146	149	162	182	197	224	266
257 University of Nebraska Medical Center	244	255	218	186	207	225	263
258 Louisiana Tech University	213	267	290	279	242	227	263
259 Forest Institute of Prof Psych	0	146	154	190	251	254	260
260 University of Tulsa	257	253	286	290	325	300	257
Total, 1st 260 insts.	336,633	340,004	349,269	359,942	365,177	369,896	377,650
261 Clark University	194	217	237	238	225	237	238
262 Calif Sch of Prof Psych - Fresno	177	195	166	194	202	207	235
263 Univ of Texas Med Branch at Galveston	173	186	198	235	248	213	231
264 New Mexico Institute of Mining and Tech	209	216	225	248	250	234	217
265 Marshall University	151	155	203	236	244	236	216
266 Medical College of Georgia	165	151	175	182	196	200	214
267 Center for Adv Studies on PR & Caribbea	358	347	373	371	248	237	213
268 University of Tennessee, Memphis	159	144	142	160	182	194	207
269 Wake Forest University	176	175	181	178	160	179	206
270 Stephen F. Austin State University	268	313	269	274	237	206	205
Total, 1st 270 insts.	338,663	342,103	351,438	362,258	367,369	372,039	379,832
271 University of South Dakota	169	162	167	185	193	186	200
272 Andrews University	86	0	0	0	0	181	189
273 Northeast Louisiana University	174	190	187	175	185	186	188
274 Union College(NY)	142	223	278	336	239	216	176
275 The Wright Institute	195	184	145	154	154	161	174
276 Biola University	188	124	171	168	160	166	173
277 University of Arkansas - Med Sci Campus	192	198	210	218	222	195	172
278 University of the Pacific	77	92	87	124	141	165	156
279 Spalding University	120	144	138	132	167	167	151
280 Oregon Grad Inst of Science & Technolog	89	122	146	152	155	178	148
Total, 1st 280 insts.	340,095	343,542	352,967	363,902	368,985	373,840	381,559
281 Chicago School of Prof Psych	110	131	100	103	130	176	144
282 Mercer University	0	0	0	0	107	136	144
283 Alfred University	153	130	122	184	161	124	143
284 Texas Christian University	116	145	140	136	133	135	143
285 Florida A & M University	58	57	66	63	65	135	140
286 Thomas Jefferson University	59	71	72	74	115	118	137
287 Creighton University	46	56	144	139	150	165	136
288 CUNY Mt. Sinai Sch of Medicine	0	0	0	0	115	130	135
289 Uniformed Serv Univ of the Hlth Science	84	94	99	100	108	116	126
290 Rockefeller University	106	117	115	121	117	117	121
Total, 1st 290 insts.	340,827	344,343	353,825	364,822	370,186	375,192	382,928
291 University of Health Sciences (Chicago)	88	87	84	139	119	148	117
292 Bryn Mawr College	178	167	152	138	133	127	116
293 Wesleyan University	104	105	114	117	121	121	115
294 Medical University of South Carolina	84	81	87	111	85	88	108
295 Indiana University of Pennsylvania	163	0	0	0	0	63	103
296 Albany Medical Center Graduate School	64	70	77	92	93	110	100
297 SUNY - Health Sci Ctr at Brooklyn	79	80	79	80	83	93	100
298 The Medical College of Pennsylvania	67	67	69	60	90	86	92
299 Oregon Health Sciences University	47	45	56	64	74	90	88
300 Medical College of Wisconsin	67	53	57	68	61	60	84
Total, 1st 300 insts.	341,768	345,098	354,600	365,691	371,045	376,178	383,951

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Table E-11. Graduate science/engineering enrollment
in doctorate-granting institutions,
ranked by total graduate science/engineering enrollment: 1983-89
-Continued

Institutional ranking	1983	1984	1985	1986	1987	1988	1989
301 SUNY - Health Sci Ctr at Syracuse	45	53	43	47	57	65	84
302 University of Northern Iowa	75	99	101	107	91	89	83
303 Xavier University	0	0	0	0	0	0	76
304 CUNY Herbert H. Lehman College	60	56	54	113	73	75	75
305 Mayo Graduate School	18	32	46	46	53	55	74
306 Eastern Virginia Medical School	63	69	74	71	73	78	70
307 Maharishi International University	0	0	0	0	0	31	68
308 University of Maryland Eastern Shore	0	0	0	0	0	39	62
309 Catholic University of Puerto Rico	16	51	48	46	58	66	61
310 Rand Graduate Institute Policy Studies	60	57	60	62	70	60	60
Total, 1st 310 insts.	342,105	345,515	355,026	366,183	371,520	376,736	384,664
311 Baylor College of Dentistry	46	58	58	46	52	56	57
312 Philadelphia Coll of Pharmacy and Sci	47	36	53	58	55	52	46
313 Institute of Paper Science & Technology	100	100	99	91	95	69	45
314 Mass College of Pharmacy/Allied Health	56	56	65	65	40	47	39
315 Meharry Medical College	36	37	41	32	34	36	35
316 Oral Roberts University	36	39	34	27	25	23	33
317 SUNY State College of Optometry	7	7	15	14	19	33	33
318 Institute of Textile Technology	20	16	16	28	31	35	30
319 Ponce School of Medicine	0	0	0	0	0	21	22
320 Phila College of Osteopathic Medicine	8	8	9	0	0	0	15
Total, 1st 320 insts.	342,461	345,872	355,416	366,544	371,871	377,108	385,019
321 Smith College	5	4	4	4	4	5	6
322 University of Massachusetts at Amherst	0	0	0	0	0	0	0
323 Kirksville College of Osteopathic Med	0	3	3	7	0	0	0
324 University of Health Sciences (Kansas C	0	0	0	0	0	0	0
325 University of New Orleans	0	0	0	0	0	0	0
326 University of Massachusetts at Worceste	0	0	0	0	0	0	0
327 Texas College of Osteopathic Medicine	50	35	51	58	60	59	0
328 Morehouse School of Medicine	0	0	0	0	0	0	0
329 Univ. of Osteopathic Med & Health Sci	0	0	0	0	0	0	0
330 NE Ohio Univ Med School	34	0	0	0	0	0	0
Total, 1st 330 insts.	342,550	345,914	355,474	366,613	371,935	377,172	385,025
331 Chicago Coll of Osteo Medicine	0	0	0	0	0	0	0
332 Univ of Texas MD Anderson Cancer Center	0	0	0	0	0	0	0
333 Atlanta University	421	411	436	425	406	389	0
334 West Virginia Sch of Osteopathic Med	0	0	0	0	0	0	0
335 University of New England	0	0	0	0	0	0	0
336 Coll of Osteopathic Med of the Pacific	0	0	0	0	0	0	0
337 Woods Hole Oceanographic Institution	100	106	112	125	120	113	0
338 Providence College	0	0	0	0	0	0	0
339 Charles R. Drew Univ of Medicine & Sci	0	0	0	0	0	0	0
Total, 1st 339 insts.	343,071	346,431	356,022	367,163	372,461	377,674	385,025

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-12. Graduate science/engineering enrollment by enrollment status and total postdoctorates in master's-granting institutions, ranked by total graduate science/engineering enrollment: 1989

Institutional ranking	Total students	Full-time students	Part-time students	Postdoctorates
Total, all institutions	55,958	19,065	36,893	55
1 Calif State Univ at Long Beach	2,021	477	1,544	0
2 San Jose State University	1,965	756	1,209	0
3 University of Houston at Clear Lake Cit	1,235	312	923	0
4 Calif State University at Northridge	1,235	476	759	0
5 Calif State Univ at Fullerton	1,036	158	878	0
6 Calif State Univ at Los Angeles	1,020	127	893	0
7 San Francisco State University	972	468	504	0
8 The Hartford Graduate Center	922	5	917	0
9 Eastern Michigan University	919	295	624	0
10 Northeastern Illinois University	875	98	777	0
Total, 1st 10 insts.	12,200	3,172	9,028	0
11 John F Kennedy University	832	285	547	0
12 Calif State University at Sacramento	815	316	499	0
13 Calif State Univ at Hayward	814	300	514	0
14 University of New Haven	785	142	643	0
15 Loyola College	761	184	577	0
16 Rochester Institute of Technology	756	96	660	0
17 Southern Illinois Univ at Edwardsville	698	400	298	0
18 Pepperdine University	693	486	207	0
19 CUNY Brooklyn College	665	66	599	0
20 Sangamon State University	633	117	516	0
Total, 1st 20 insts.	19,652	5,564	14,088	0
21 Southwest Texas State University	613	236	377	0
22 Moorhead State University	599	525	74	0
23 Calif State University at Fresno	598	330	268	0
24 Governors State University	595	31	564	0
25 St Mary's College of Minnesota	575	0	575	0
26 Russell Sage College	556	29	527	0
27 Hood College	524	16	508	0
28 Calif State Polytechnic Univ at Pomona	519	99	420	0
29 CUNY Queens College	518	124	394	4
30 CUNY Bernard Baruch College	479	174	305	0
Total, 1st 30 insts.	25,228	7,128	18,100	4
31 Univ of North Carolina at Charlotte	452	164	288	4
32 SUNY College at Brockport	447	71	376	1
33 Roosevelt University	438	84	354	0
34 Calif State University at Chico	435	300	135	0
35 CUNY John Jay College of Crim Justice	432	45	387	0
36 Iona College	427	9	418	0
37 Towson State University	415	100	315	0
38 Western Illinois University	384	267	117	0
39 Univ of West Virginia Coll of Grad Stds	377	45	332	0
40 Calif State Univ at Dominguez Hills	369	201	168	0
Total, 1st 40 insts.	29,404	8,414	20,990	9
41 Manhattan College	362	135	227	0
42 St Joseph's University	356	30	326	0
43 Murray State University	341	136	205	0
44 Middle Tennessee State University	338	67	271	0
45 Pittsburg State University	328	166	162	0
46 Calif Poly State Univ at San Luis Obisp	327	227	100	0
47 University of Bridgeport	320	101	219	0
48 Eastern Kentucky University	314	134	180	0
49 Mankato State University	312	225	87	0
50 University of West Florida	305	81	224	0
Total, 1st 50 insts.	32,707	9,716	22,991	9
51 Arkansas State University	303	93	210	0
52 University of Nevada at Las Vegas	294	128	166	0
53 West Chester University of Pennsylvania	285	102	183	0
54 Western Washington University	283	236	47	3
55 North Carolina A & T State University	280	220	60	3
56 College of New Rochelle	278	0	278	0
57 California State Univ - Bakersfield	273	16	257	0
58 University of Wisconsin - Oshkosh	270	75	195	0
59 Milwaukee School of Engineering	266	0	266	0
60 Shippensburg University of Pennsylvania	259	68	191	0
Total, 1st 60 insts.	35,498	10,654	24,844	15

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Table E-12. Graduate science/engineering enrollment by enrollment status and total postdoctorates in master's-granting institutions, ranked by total graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total students	Full-time students	Part-time students	Postdoc-torates
61 Montclair State College	256	43	213	0
62 Chapman College	253	60	193	0
63 University of Tennessee at Chattanooga	252	77	175	0
64 Seattle University	250	57	193	0
65 Marist College	248	37	211	0
66 Calif State Univ at San Bernardino	242	91	151	0
67 University of Central Arkansas	233	233	0	0
68 Valdosta State College	231	123	108	0
69 Radford University	228	118	110	0
70 Central Missouri State University	226	93	133	0
Total, 1st 70 insts.	37,917	11,586	26,331	15
71 Northrop University	224	146	78	0
72 SUNY College at Oswego	223	93	130	1
73 Eastern Washington University	220	142	78	0
74 Loyola Marymount University	220	127	93	0
75 Western Kentucky University	218	114	104	0
76 Edinboro University of Pennsylvania	217	118	99	0
77 Tennessee State University	217	75	142	5
78 Appalachian State University	217	107	110	0
79 Georgia College	217	57	160	0
80 University of Baltimore	214	47	167	0
Total, 1st 80 insts.	40,104	12,612	27,492	21
81 Jackson State University	211	106	105	0
82 Texas Southern University	207	98	109	0
83 Alabama A & M University	206	161	45	8
84 SUNY College at New Paltz	205	28	177	1
85 University of Hartford	204	134	70	0
86 Sonoma State University	203	43	160	0
87 Kutztown University of Pennsylvania	194	25	169	0
88 Bradley University	190	117	73	1
89 Texas A & I University	189	108	81	1
90 Humboldt State University	187	106	81	0
Total, 1st 90 insts.	42,100	13,538	28,562	32
91 Southeastern Massachusetts University	186	105	81	0
92 Troy State University at Montgomery	182	59	123	0
93 University of Texas at Tyler	181	56	125	0
94 University of La Verne	181	66	115	0
95 Western New England College	180	0	180	0
96 University of San Diego	179	32	147	0
97 Widener University	178	29	149	0
98 Monmouth College(NJ)	178	23	155	0
99 University of Texas at San Antonio	176	36	140	0
100 Southern Connecticut State University	176	83	93	0
Total, 1st 100 insts.	43,897	14,027	29,870	32
101 MGH Institute of Health Professions	176	95	81	0
102 Assumption College	176	30	146	0
103 Northern Michigan University	175	28	147	0
104 West Coast University	173	161	12	0
105 Chicago State University	171	17	154	0
106 University of Wisconsin - Stout	168	123	45	0
107 Northwestern State Univ of Louisiana	166	51	115	0
108 Grand Valley State University	162	24	138	0
109 Quinnipiac College	160	18	142	0
110 American International College	155	23	132	0
Total, 1st 110 insts.	45,579	14,597	30,982	32
111 Xavier University	155	122	33	0
112 Eastern Illinois University	153	98	55	0
113 Azusa Pacific University	151	14	137	0
114 University of Arkansas at Little Rock	151	57	94	0
115 James Madison University	148	101	47	0
116 Rivier College	145	15	130	0
117 Drake University	145	24	121	0
118 California University of Pennsylvania	142	79	63	0
119 University of San Francisco	141	107	34	0
120 St. Joseph College	141	0	141	0
Total, 1st 120 insts.	47,051	15,214	31,837	32

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Table E-12. Graduate science/engineering enrollment by enrollment status and total postdoctorates in master's-granting institutions, ranked by total graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total students	Full-time students	Part-time students	Postdoc-torates
121 Youngstown State University	140	43	97	0
122 Southern University A & M College	138	51	87	0
123 Marywood College	137	17	120	0
124 Corpus Christi State University	136	32	104	0
125 Calif State Univ of Stanislaus	134	52	82	0
126 West Texas State University	134	53	81	0
127 Emporia State University - Kansas	133	84	49	0
128 University of Wisconsin - Stevens Point	131	106	25	0
129 University of Wisconsin - Eau Claire	130	60	70	0
130 Anna Maria College	129	6	123	0
Total, 1st 130 insts.	48,393	15,718	32,675	32
131 Lincoln University	128	11	117	0
132 McNeese State University	126	46	80	0
133 Hampton University	124	83	41	0
134 Prairie View A & M University	123	99	24	0
135 Western Carolina University	117	61	56	0
136 Rose-Hulman Institute of Technology	116	44	72	0
137 University of Alaska at Anchorage	116	39	77	1
138 Abilene Christian University	115	86	29	0
139 Salem State College	112	7	105	0
140 Trinity University	112	31	81	0
Total, 1st 140 insts.	49,582	16,225	33,357	33
141 Incarnate Word College	111	28	83	0
142 Eastern New Mexico University	110	14	96	0
143 Southwest Missouri State University	110	54	56	0
144 Tuskegee University	110	103	7	0
145 Jacksonville State University	108	32	76	0
146 William Paterson College	108	33	75	1
147 University of Central Texas	107	28	79	0
148 East Stroudsburg Univ of Pennsylvania	105	42	63	5
149 Central Washington University	102	71	31	0
150 Wagner College	102	14	88	0
Total, 1st 150 insts.	50,655	16,644	34,011	39
151 Kean College of New Jersey	102	24	78	0
152 University of Scranton	101	33	68	0
153 National University	100	100	0	0
154 West Georgia College	99	37	62	0
155 Dominican College of San Rafael	99	40	59	0
156 Millersville University of Pennsylvania	96	26	70	0
157 Angelo State University	94	42	52	0
158 Montana College Mineral Sci & Technolog	94	83	11	0
159 Bloomsburg University of Pennsylvania	94	43	51	0
160 Slippery Rock University of Pennsylvani	92	92	0	0
Total, 1st 160 insts.	51,626	17,164	34,462	39
161 College of St Rose	88	9	79	0
162 Northwest Missouri State University	86	40	46	0
163 SUNY College at Buffalo	84	9	75	0
164 CUNY College of Staten Island St George	83	28	55	1
165 Gannon University	82	8	74	0
166 University of Evansville	78	9	69	0
167 Clarion University of Pennsylvania	77	25	52	0
168 Midwestern State University	76	13	63	0
169 Rhode Island College	75	13	62	0
170 College of Charleston	74	38	36	0
Total, 1st 170 insts.	52,429	17,356	35,073	40
171 Emerson College	74	63	11	0
172 Pacific Lutheran University	73	32	41	0
173 Southwestern Oklahoma State University	70	24	46	0
174 Winthrop College	70	39	31	0
175 Washington College	69	0	69	0
176 Bucknell University	69	53	16	3
177 Fort Hays State University	68	52	16	0
178 University of Wisconsin - Green Bay	68	25	43	0
179 Valparaiso University	67	8	59	0
180 Fort Valley State University	66	13	53	0
Total, 1st 180 insts.	53,123	17,665	35,458	43

Continued on next page.

Table E-12. Graduate science/engineering enrollment by enrollment status and total postdoctorates in master's-granting institutions, ranked by total graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total students	Full-time students	Part-time students	Postdoctorates
181 Morgan State University	65	43	22	0
182 John Carroll University	64	30	34	0
183 SUNY College of Technology at Utica/Rom	63	17	46	0
184 St. Cloud State University	63	30	33	0
185 Saint Francis College	62	12	50	0
186 North Carolina Central University	62	25	37	0
187 University of the District of Columbia	62	27	35	0
188 Georgia Southern College	59	31	28	3
189 Trenton State College	59	8	51	0
190 Sul Ross State University	59	41	18	0
Total, 1st 190 insts.	53,741	17,929	35,812	46
191 University of North Carolina/Wilmington	58	12	46	0
192 University of Wisconsin - La Crosse	56	17	39	0
193 Tarleton State University	55	43	12	5
194 SUNY College at Geneseo	55	42	13	0
195 Nicholls State University	54	19	35	0
196 Morehead State University	54	27	27	0
197 Butler University	53	0	53	0
198 Worcester State College	53	20	33	0
199 University of Texas of the Permian Basi	52	12	40	0
200 Kearney State College	51	10	41	0
Total, 1st 200 insts.	54,282	18,131	36,151	51
201 Cooper Union	51	24	27	0
202 Virginia State University	47	31	16	0
203 Marycrest College	46	10	36	0
204 Frostburg State University	46	20	26	0
205 University of Wisconsin - Whitewater	46	35	11	0
206 Goddard College	45	45	0	0
207 Central Connecticut State University	45	13	32	0
208 Austin Peay State University	45	29	16	0
209 University of Wisconsin - River Falls	45	13	32	0
210 Sarah Lawrence College	44	43	1	0
Total, 1st 210 insts.	54,742	18,394	36,348	51
211 St Mary's University of San Antonio	42	17	25	0
212 New Mexico Highlands University	40	32	8	0
213 Southeast Missouri State University	37	21	16	0
214 SUNY College at Plattsburgh	36	28	8	0
215 Gallaudet University	35	35	0	0
216 Bridgewater State College	34	3	31	0
217 Wilkes University	33	6	27	0
218 Mississippi University for Women	33	23	10	0
219 Washburn University of Topeka	30	11	19	0
220 Loras College	30	6	24	0
Total, 1st 220 insts.	55,092	18,576	36,516	51
221 Framingham State College	30	9	21	0
222 Southeastern Louisiana University	29	21	8	0
223 University of Houston - Victoria	29	8	21	0
224 Southern Oregon State College	29	20	9	0
225 University of Portland	28	6	22	0
226 Coppin State College	28	9	19	0
227 Trinity College	28	0	28	0
228 Indiana Wesleyan University	27	7	20	0
229 Northeast Missouri State University	27	21	6	0
230 University of Redlands	27	23	4	0
Total, 1st 230 insts.	55,374	18,700	36,674	51
231 University of Montevallo	26	17	9	0
232 Augusta College	25	25	0	0
233 University of Wisconsin - Platteville	23	13	10	0
234 University of Richmond	23	16	7	0
235 Saint Martin's College	23	3	20	0
236 Connecticut College	22	19	3	0
237 Pratt Institute	21	10	11	0
238 Fisk University	21	17	4	0
239 Alabama State University	20	18	2	0
240 Pacific States University	20	10	10	0
Total, 1st 240 insts.	55,598	18,848	36,750	51

Continued on next page.

Table E-12. Graduate science/engineering enrollment by enrollment status and total postdoctorates in master's-granting institutions, ranked by total graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total students	Full-time students	Part-time students	Postdoctorates
241 Jacksonville University	20	3	17	0
242 University of Alaska Southeast	20	5	15	0
243 Williams College	19	19	0	0
244 SUNY College at Fredonia	19	15	4	1
245 Delaware State University	18	2	16	0
246 Drew University	18	15	3	0
247 West Virginia Institute of Technology	18	12	6	0
248 Western Connecticut State University	16	0	16	0
249 Bemidji State University	16	5	11	0
250 Grambling State University	15	15	0	0
Total, 1st 250 insts.	55,777	18,939	36,838	52
251 Gonzaga University	15	10	5	0
252 Ithaca College	15	12	3	0
253 Pan American University	15	4	11	0
254 St Bonaventure University	14	12	2	0
255 Mount Holyoke College	13	13	0	0
256 SUNY College at Cortland	13	10	3	0
257 Niagara University	13	9	4	0
258 University of Charleston	11	4	7	0
259 Mansfield University of Pennsylvania	11	9	2	0
260 East Central University	10	7	3	0
Total, 1st 260 insts.	55,907	19,029	36,878	52
261 Hollins College	8	4	4	0
262 Whitworth College	7	4	3	0
263 Vassar College	6	0	6	0
264 Pacific University	6	6	0	0
265 Harvey Mudd College	6	6	0	0
266 SUNY College at Oneonta	5	5	0	0
267 Furman University	5	5	0	0
268 Walla Walla College	2	1	1	0
269 SUNY College at Potsdam	2	1	1	0
270 Occidental College	2	2	0	0
Total, 1st 270 insts.	55,956	19,063	36,893	52
271 Middlebury College	1	1	0	0
272 Loyola University in New Orleans	1	1	0	0
273 University of Guam	0	0	0	0
274 Marlboro College	0	0	0	0
275 Swarthmore College	0	0	0	3
Total, 1st 275 insts.	55,958	19,065	36,893	55

SOURCE: National Science Foundation, SRS

Table E-13. Graduate science/engineering enrollment by enrollment status and total postdoctorates in historically black colleges and universities, ranked by total graduate science/engineering enrollment: 1989

Institutional ranking	Total students	Full-time students	Part-time students	Postdoctorates
Total, all institutions	3,429	2,091	1,338	47
1 Howard University	656	427	229	14
2 Clark Atlanta University	312	219	93	2
3 North Carolina A & T State University	280	220	60	3
4 Tennessee State University	217	75	142	5
5 Jackson State University	211	106	105	0
6 Texas Southern University	207	98	109	0
7 Alabama A & M University	206	161	45	8
8 Florida A & M University	140	115	25	5
9 Southern University A & M College	138	51	87	0
10 Lincoln University	128	11	117	0
Total, 1st 10 insts.	2,495	1,483	1,012	37
11 Hampton University	124	83	41	0
12 Prairie View A & M University	123	99	24	0
13 Tuskegee University	110	103	7	0
14 Xavier University	76	65	11	0
15 Fort Valley State University	66	13	53	0
16 Morgan State University	65	43	22	0
17 University of Maryland Eastern Shore	62	23	39	0
18 University of the District of Columbia	62	27	35	0
19 North Carolina Central University	62	25	37	0
20 Virginia State University	47	31	16	0
Total, 1st 20 insts.	3,292	1,995	1,297	37
21 Meharry Medical College	35	35	0	6
22 Coppin State College	28	9	19	0
23 Fisk University	21	17	4	0
24 Alabama State University	20	18	2	0
25 Delaware State University	18	2	16	0
26 Grambling State University	15	15	0	0
27 Morehouse School of Medicine	0	0	0	4
Total, 1st 27 insts.	3,429	2,091	1,338	47

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

Table E-14. Graduate science/engineering enrollment by enrollment status and total postdoctorates in land-grant institutions, ranked by total graduate science/engineering enrollment: 1989

Institutional ranking	Total students	Full-time students	Part-time students	Postdoctorates
Total, all institutions	137,989	109,469	28,520	9,742
1 University of Minnesota	5,607	4,697	910	333
2 University of Wisconsin - Madison	5,571	4,916	655	441
3 Ohio State University	5,164	4,435	729	284
4 University of Calif at Berkeley	5,057	5,057	0	723
5 University of Illinois at Urbana	4,792	4,684	108	219
6 Texas A & M University	4,635	3,928	707	201
7 University of Calif at Los Angeles	4,442	4,345	97	626
8 Pennsylvania State University	4,348	3,141	1,207	159
9 Rutgers the State University	4,093	2,025	2,068	185
10 Purdue University	4,040	3,686	354	196
Total, 1st 10 insts.	47,749	40,914	6,835	3,367
11 Massachusetts Institute of Technology	4,032	3,913	119	451
12 University of Maryland - College Park	3,860	2,309	1,551	164
13 Cornell University	3,636	3,636	0	403
14 University of Arizona	3,474	2,867	607	251
15 Virginia Polytechnic Inst and State Uni	3,242	2,413	829	65
16 University of Massachusetts	3,130	1,566	1,564	187
17 North Carolina State Univ at Raleigh	3,114	2,484	630	168
18 Michigan State University	3,051	2,555	496	196
19 University of Illinois at Chicago	3,044	1,875	1,169	145
20 University of Tennessee at Knoxville	2,738	1,667	1,071	147
Total, 1st 20 insts.	81,070	66,199	14,871	5,544
21 Iowa State University of Sci & Tech	2,680	2,225	455	77
22 University of Calif at Davis	2,668	2,530	138	238
23 Louisiana State University System	2,340	1,913	427	208
24 University of Kentucky	1,878	1,442	436	144
25 Colorado State University	1,864	1,397	467	175
26 University of Hawaii at Manoa	1,857	1,539	318	43
27 University of Missouri - Columbia	1,843	1,293	550	104
28 Oregon State University	1,761	1,613	148	71
29 University of Calif at San Diego	1,702	1,590	112	560
30 Oklahoma State University	1,690	707	983	28
Total, 1st 30 insts.	101,353	82,448	18,905	7,192
31 Kansas State University	1,533	1,308	225	58
32 University of Georgia	1,501	1,314	187	130
33 Auburn University	1,496	1,258	238	44
34 Clemson University	1,458	1,158	300	11
35 University of Calif at Santa Barbara	1,440	1,408	32	134
36 Florida State University	1,425	1,061	364	60
37 West Virginia University	1,396	934	462	60
38 University of Rhode Island	1,278	860	418	46
39 Utah State University	1,247	1,085	162	37
40 University of Missouri - Rolla	1,231	589	642	8
Total, 1st 40 insts.	115,358	93,423	21,935	7,780
41 University of Delaware	1,218	878	340	41
42 University of Calif at Irvine	1,200	1,124	76	244
43 Washington State University	1,191	1,085	106	80
44 University of Puerto Rico - Rio Piedras	1,116	671	445	5
45 Mississippi State University	1,090	842	248	17
46 University of Calif at San Francisco	1,037	1,021	16	909
47 University of Idaho	960	505	455	27
48 University of Arkansas	940	679	261	33
49 University of Maryland - Balt Prof Sch	921	429	492	98
50 University of Missouri - Kansas City	908	380	528	14
Total, 1st 50 insts.	125,939	101,037	24,902	9,248
51 New Mexico State University	856	598	258	20
52 University of Maryland - Baltimore Cnty	835	449	386	16
53 University of Wyoming	802	630	172	30
54 University of Nevada at Reno	762	555	207	39
55 University of Calif at Riverside	672	632	40	118
56 University of Maine at Orono	667	505	162	16
57 University of New Hampshire	634	435	199	0
58 North Dakota State University	618	513	105	15
59 University of Vermont & St Agric Colleg	618	461	157	77
60 University of Puerto Rico Med Sci Campu	601	347	254	2
Total, 1st 60 insts.	133,004	106,162	26,842	9,581

Continued on next page.

Table E-14. Graduate science/engineering enrollment by enrollment status and total postdoctorates in land-grant institutions, ranked by total graduate science/engineering enrollment: 1989 -Continued

Institutional ranking	Total students	Full-time students	Part-time students	Postdoc-torates
61 University of Calif at Santa Cruz	555	555	0	27
62 Montana State University	515	459	56	30
63 University of Nebraska - Omaha	473	108	365	0
64 University of Alaska at Fairbanks	444	346	98	6
65 South Dakota State University	437	293	144	6
66 University of Puerto Rico	364	360	4	0
67 University of Missouri - St Louis	313	156	157	9
68 North Carolina A & T State University	280	220	60	3
69 University of Tennessee at Chattanooga	252	77	175	0
70 Tennessee State University	217	75	142	5
Total, 1st 70 insts.	136,854	108,811	28,043	9,667
71 University of Tennessee, Memphis	207	148	59	62
72 Alabama A & M University	206	161	45	8
73 Florida A & M University	140	115	25	5
74 Southern University A & M College	138	51	87	0
75 Lincoln University	128	11	117	0
76 Prairie View A & M University	123	99	24	0
77 Fort Valley State University	66	13	53	0
78 University of the District of Columbia	62	27	35	0
79 Virginia State University	47	31	16	0
80 Delaware State University	18	2	16	0
Total, 1st 80 insts.	137,989	109,469	28,520	9,742

NOTE: Includes medical schools.

SOURCE: National Science Foundation, SRS

section iv.

instructions, survey instruments and summaries

Instructions and Survey Instruments

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NSF FORM 811
OCTOBER 89

NATIONAL SCIENCE FOUNDATION AND NATIONAL INSTITUTES OF HEALTH
SURVEY OF GRADUATE STUDENTS AND POSTDOCTORATES IN SCIENCE AND ENGINEERING, FALL 1989

FORM APPROVED
OMB NO. 314 062
APP. EXP. 12/31/90

INSTRUCTIONS FOR SURVEY COORDINATOR

PAGE 1 OF 2

INSTITUTION: 001002-0 Alabama A & M University

1. Please review the list of departments and programs printed on the following pages for accuracy and completeness. Please add any newly formed graduate science or engineering (S/E) departments or programs in the spaces provided at the end of the departmental/program list and note any name changes or reorganizations where they occur. If your institution has any departments which combine computer science/computer engineering with other programs or areas of specialization, please complete a separate form 812 for each program. Separate data sheets should also be provided for (1) clinical psychology and (2) all other psychology departments/programs.

2. Please cross out any discontinued or non-S/E programs on the departmental/program list. Those which do not have graduate students or postdoctorates in Fall 1989, but may have them in the future, should NOT be crossed out; a check in column (6) of the departmental/program list can be used in place of a form 812 for such departments/programs.

3. A Crosswalk listing relevant fields of S/E is enclosed, showing the 3-digit NSF code and comparable NCES discipline codes for each. Please review the first 3 digits of the codes in column (2) of the departmental/program list to verify the discipline to which each department or program has been assigned. If you do not agree with this code, note the discipline code to which your department or program most closely corresponds.

4. IN MEDICAL SCHOOLS ONLY, departments or programs followed by a single asterisk (*) include the indented sections or specialties listed beneath them. These sections or specialties may be without organizational autonomy; however, separate data are requested because of special NIH interest in these areas. Please be sure that no duplicate data are reported for the sections/specialties and their parent programs.

5. Please distribute the enclosed form 812's at your earliest convenience to all listed and newly formed departments or programs if data cannot be obtained from your centralized files. Definitions for all data items requested are provided on the form 812's. Please follow these guidelines when completing the forms.

6. Please review the form 812's for completeness and reporting consistency and verify or supply the highest degree program offered by each department or program. Please check this year's data against the previous year's data shown on the departmental/program list and indicate the validity of any large year-to-year changes in the "Comments" section below or on the individual form 812's.

7. Please exclude from your response all graduate departments in the fields of education, law, humanities, music, the arts, physical education, library sciences, and all other non-S/E fields.

8. Please return one copy of form 811 (this form) along with one copy of each of the completed form 812's by JANUARY 31, 1990 to:

Quantum Research Corporation
7300 Pearl Street
Suite 210
Bethesda, MD 20814

9. Care should be taken to submit as complete and accurate a report as possible so that follow-up procedures with your institution can be reduced to a minimum and more timely statistics can be made available. If there are any questions concerning your response, please call Ms. Michele Holubek at Quantum Research Corporation, (301) 657-3073. Thank you.

SURVEY COORDINATOR:
NAME: Bessie W. Jones
TITLE: Dean, School of Arts and Sciences
ADDRESS: Alabama A & M University

P.O. Box 182
Normal, Alabama 35762
TELEPHONE: (205) 851-5300

SIGNATURE OF SURVEY COORDINATOR

DATE COMPLETED

COMMENTS:

NSF FORM [illegible]11
OCTOBER [illegible]9

NATIONAL SCIENCE FOUNDATION A[illegible] NATIONAL INSTITUTES OF HEALTH
SURVEY OF GRADUATE STUDENTS AND POSTDOCTO[illegible]ES IN SCIENCE AND ENGINEERING, FALL 1989

FORM AP[illegible]VED
OMB NO. 314 062
APP. EXP. 12/31/90

LIST OF DEPARTMENTS AND PROGRAMS

PAGE 2 OF 2

INSTITUTION: 001002-0 Alabama A & M University

1988 RESPONSE CODE **	DEPARTMENT CODE ***	SCIENCE OR ENGINEERING DEPARTMENTS OR PROGRAMS	DEPARTMENTAL DEGREE LEVEL	REPORTED FOR FALL 1988: FULL TIME	PART TIME	POST-DOCS.	CHECK HERE IF NO STUDENTS AND NO POSTDOCTORATES
(1)	(2)	(3)	(4)		(5)		(6)
1	20301	Physics & Applied Physics	DOCTORATE	28	10	6	____
1	40101	Computer and Information Science	MASTER'S	60	10	0	____
1	60301	Biology	MASTER'S	8	16	0	____
1	60601	Plant and Soil Science	MASTER'S	16	3	2	____
1	61201	Food Science & Animal Industries	MASTER'S	24	0	0	____
1	91001	Community Planning & Urban Studies	MASTER'S	9	12	0	____
				----	----	----	
TOTAL, ALL DEPARTMENTS OR PROGRAMS:				145	51	8	

ADDITIONAL DEPARTMENTS OR PROGRAMS FOR FALL 1989:
(Please fill in columns 3, 4, and if applicable, column 6. Please indicate in column 2 the NSF discipline code you feel is most appropriate, or provide a brief description of the department/program's major area of concentration.)

____	____________________	____	____
____	____________________	____	____
____	____________________	____	____
____	____________________	____	____

** 1988 RESPONSE CODE MEANINGS:

1 -- Matched, Data Present

*** THE FIRST THREE DIGITS OF THE DEPARTMENT CODE ARE A FIELD OF SCIENCE/ENGINEERING CODE; A LIST OF THESE CODES IS ENCLOSED.

NOTE: This information is solicited under the authority of the National Science Foundation Act of 1950 as amended. All information you provide will be used for statistical purposes only. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

INSTRUCTIONS FOR SURVEY OF GRADUATE STUDENTS AND POSTDOCTORATES IN SCIENCE AND ENGINEERING, FALL 1989

Purpose of the survey

The survey provides a comprehensive picture of the training of future scientists and engineers in the Nation's graduate schools. Data are used by Congress and the executive branch during budget preparation, and by State government agencies and other analysts to assess future supply and demand of science and engineering (S/E) personnel.

The average time required for questionnaire completion is 2 hours. Response burden comments should be directed to Herman Fleming at (202) 357-9520.

Students to include in survey tabulations

Count as graduate students persons enrolled for credit in a S/E master's or Ph.D. degree program in fall 1989. Report M.D., D.O., D.V.M. or D.D.S. candidates, interns and residents only if they are concurrently working for a S/E master's or Ph.D. or are enrolled in a joint medical/Ph.D. program. Individuals who already hold graduate or medical degrees and are working on another master's or Ph.D. degree are considered graduate students (Items 5-7), not postdoctorates (Item 8).

Include S/E students performing thesis or dissertation research away from the campus (for example, at Government- and contractor-owned facilities) in the United States as long as they are enrolled for credit in an advanced-degree program. Exclude students enrolled in a foreign country (at a branch or extension center), as well as non-matriculated students.

All data should be reported in terms of headcounts, not full-time equivalents (FTEs).

Students enrolled in multiple departments/institutions

A student should be reported in only one department. Students enrolled in interdisciplinary/interinstitutional programs should be counted only once, by their "home" department and institution.

Incomplete data

Please write "unavailable" or "unknown" in data cells as applicable. "N/A" means "not applicable" on this form. Data cells left blank are presumed to be zeroes.

ITEM 5: FULL-TIME STUDENTS

Use lines (1)-(6) to report all **full-time** students according to the source of the largest amount of their support. These students are engaged full-time in their training activities in their S/E fields; these activities may embrace any appropriate combination of study, teaching and research, depending on your institution's own policy.

Mechanisms of support lines (1)-(5)

The selection process distinguishes fellowships from traineeships. A **fellowship** (1) is awarded directly to,or on behalf of, a student selected in a competition, usually national in scope, to enable pursuit of post-baccalaureate training. A **traineeship** (2) is an educational award to a student selected by his university. An **assistantship** should be classified as **research** (3) or **teaching** (4), depending on assigned duties, e.g., a student devoting most of his time to teaching should be reported on line (4). All other full-time students, including members of the armed forces whose tuition is paid by the Department of Defense, should be reported on line (5).

Federal sources of support columns (A)-(F)

Note that students supported by Federal loans should be reported in column (J): self-supported.

Department of Defense (DOD) (A): Sources include the Departments of the Army, Navy, or Air Force, as well as programs within the Office of the Secretary of Defense. Students receiving their main support from the Veterans Administration under the G.I. Bill should be reported under column (F), "Other Federal sources".

Department of Health and Human Services (HHS) (B) and (C): Report students receiving support from the institutes or divisions of the National Institutes of Health (NIH) under (B); support from all other components of HHS should be reflected in (C). Refer to the organizational roster under "Definitions".

U.S. Department of Agriculture (USDA) (E): Include research assistants working on projects financed out of Hatch, McIntyre-Stennis, or Smith-Lever formula funds, competitive research grants, and institution fellowship/training grants.

Other Federal Sources (F): Report students receiving support from Federal agencies other than (A) through (E) such as the Fulbright program, the G.I Bill, and Department of Education programs.

Non-Federal Sources of Support columns (G)-(I)

Institutional support (G): Report students supported from your institution, including those receiving tuition waivers. State and local goverment support is also reflected in this column. Students supported from funds originating with the Federal government, such as training grants, should be reported under the appropriate Federal agency.

Foreign sources (H): Include students supported from any non-U.S. source, such as foreign governments, industrial firms, or specialized agencies of the United Nations.

Other U.S. sources (I): Include students supported from nonprofit institutions, private industry, and all other nonfederal U.S. sources not included in columns (G) or (J).

Self-supported students (J): Report both foreign and U.S. citizen students whose main source of support is derived from loans from any source (including the Federal government) and from personal or family financial contributions. Note that these students should be included in the total, column (K).

Women, line (7)

Report all female students by their source of main support. Please note that in each column, data on line (7) should not exceed the total on line (6).

First-year students, lines (8) and (9)

A first-year student is one who will have completed less than a full year of graduate study as of the beginning of the fall term in 1989 in the program in which he/she is enrolled for a degree. All other students should be considered beyond their first year.

ITEM 6: PART-TIME STUDENTS

Report all part-time students here, regardless of their support source. These students are enrolled in advanced-degree programs and are not pursuing graduate work full-time, as defined by your institution.

ITEM 7: CITIZENSHIP AND RACIAL/ETHNIC BACKGROUND OF U.S.CITIZENS

Persons with U.S. citizenship should be reported in columns (A) through (F). Use the racial/ethnic designations from the Bureau of the Census listed under "Definitions". As applied in this survey, these designations do not denote scientific definitions of anthropological origins; thus, a student may be included in the group to which he appears to belong, identifies with, or is regarded in the community as belonging. Count each person in only one racial/ethnic group.

Non-U.S. citizens, whether permanent residents or holding temporary visas, should be reported in column (G): foreign. Applicants for U.S. citizenship should be reported as foreign. Native residents of a U.S. possession are U.S. citizens.

Total full- and part-time enrollments reported in this item should match those reported in items 5 and 6, respectively.

ITEM 8: POSTDOCTORATES AND NONFACULTY RESEARCH STAFF WITH DOCTORATES

Include individuals with S/E Ph.D.'s, M.D.'s, D.D.S.'s or D.V.M.'s (including foreign degrees that are equivalent to U.S. doctorates) who devote their primary effort to research activities or study in the department under temporary appointments carrying no academic rank. They may contribute to the academic program through seminars, lectures, or working with graduate students. Their postdoctoral activities provide additional training for them. Include persons affiliated with this department as well as those employed in associated academic research units. Exclude clinical fellows and those with appointments in residency training programs in medical and health professions, unless research training under the supervision of a senior mentor is the primary purpose of the appointment.

Use columns (A) - (D) to report postdoctorates by source of support, with the total number reported in column (E). Of this total, report the number who are foreign in column (F). Column (G), other nonfaculty doctoral research staff with doctorates, should include all doctoral scientists and engineers who are involved principally in research activities but are considered neither postdoctoral appointees nor members of the regular faculty.

On line (2), report the number of women in each category. On line (3), report those postdoctorates and nonfaculty research staff who hold first professional medical degrees (M.D., D.D.S., D.O., D.V.M.). Please note that in each column, data on lines (2) and (3) should not exceed the total on line (1).

DEFINITIONS:

(1) National Institutes of Health Organizational Roster
Item 5, column (B)

Division of Research Resources
Fogarty International Center
National Cancer Institute
National Center for Nursing Research
National Eye Institute
National Heart, Lung and Blood Institute
National Institute on Aging
National Institute on Allergy and Infectious Disease
National Institute of Arthritis and Musculoskeletal and Skin Diseases
National Institute of Diabetes and Digestive and Kidney Diseases
National Institute of Child Health and Human Development
National Institute of Dental Research
National Institute of Environmental Health Sciences
National Institute of General Medical Sciences
National Institute of Neurological and Communicative Disorders and Stroke
National Library of Medicine

(2) Other HHS Administrative Units
Item 5, column (C)

Alcohol, Drug Abuse and Mental Health Administration
National Institute of Mental Health
Center for Disease Control
Food and Drug Administration
Health Resources Administration
Health Services Administration
Office of Human Development

(3) Racial/Ethnic Categories for U.S. Citizens defined by the Bureau of the Census (Item 7)

Black, non-Hispanic: Persons having origins in any of the Black racial groups (except those of Hispanic origin).

American Indian or Alaskan native: Persons having origins in any of the original peoples of North America.

Asian or Pacific Islander: Persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. These areas include China, Japan, Korea, the Philippine Islands, and Samoa.

Hispanic: Persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

White, non-Hispanic: Persons having origins in any of the original peoples of Europe, North Africa or the Middle East, except those of Hispanic origin.

For further information ...

If you have any questions regarding the survey, please contact Ms. Michele Holubek of Quantum Research Corporation at (301) 657-3070 [fax # (301) 657-3862].

UPON COMPLETING THIS FORM, PLEASE RETURN IT TO YOUR SURVEY COORDINATOR FOR TRANSMITTAL BY JANUARY 31, 1990.

NSF Form 812 Aug 89

Please return completed form to your survey coordinator for forwarding to:
Quantum Research Corporation
7300 Pearl Street, Suite 210
Bethesda, MD 20814

NATIONAL SCIENCE FOUNDATION and NATIONAL INSTITUTES OF HEALTH

Survey of Graduate Students and Postdoctorates in Science and Engineering, Fall 1989

DEPARTMENT OR PROGRAM DATA SHEET

Form Approved
OMB No 3145-0062
Appr Exp 12/31/90

due date: January 31, 1990

Identifying Information (Items 1-4)

1. Institution Name ______________________

2. Name of S/E department or program: ______________________

If changed since last year, please indicate previous name and whether this represents a merger, split, or expanded program: ______________________

3. Person in department (or program) preparing this form:

Name: ______________________

Title: ______________________

Phone: (   ) ______________________

Institution and department code (LEAVE BLANK)

4. Highest degree granted by department or program in 1989/90, (CHECK ONE ONLY) If your department has never granted a graduate degree, but is a department of clinical medicine with or without postdoctorates, check (3).

Doctorate ________(1) Master's ________(2) No graduate degree offered ________(3)

Report all data on a "headcount" basis, not FTEs, fractions, or decimals. If your department or program does not enroll graduate students, please move to Item 8.

5. NUMBER OF **FULL-TIME** GRADUATE STUDENTS enrolled for advanced degrees (master's and doctorate) in fall 1989. Report each student **only once** according to the source and mechanism of the **largest amount of support** received in fall 1989.

Students receiving equal support from multiple sources or through multiple mechanisms should be reported only once. To determine the primary source, consider only tuition and other academic expenses.

MECHANISMS OF SUPPORT		STUDENTS RECEIVING FINANCIAL ASSISTANCE									SELF-SUPPORTED STUDENTS	**TOTAL FULL-TIME GRADUATE ENROLLMENT**
		FEDERAL SOURCES (excluding loans)						NON-FEDERAL SOURCES				
			HHS									
		Department of Defense (A)	National Institutes of Health (B)	Other HHS (C)	National Science Foundation (D)	Department of Agriculture (E)	Other Federal sources (F)	Institutional support (Including State and local government) (G)	Foreign sources (H)	Other U.S. sources (I)	(Including loans and family sources) (J)	(Sum of (A) thru (J)) (K)
Graduate Fellowships	(1)										▨	
Graduate Traineeships	(2)										▨	
Graduate Research Assistantships	(3)										▨	
Graduate Teaching Assistantships	(4)	▨							▨		▨	
Other Types of Support	(5)										▨	
FULL-TIME TOTAL[1]	(6)											
Of the students in line (6), how many in each data cell are WOMEN?	(7)											
FIRST-YEAR STUDENTS	(8)	Of the students on line (6), column (K), how many are FIRST-YEAR students? (Should not exceed total on line (6)).										
FIRST-YEAR WOMEN STUDENTS	(9)	Of the first-year students on line (8), how many a e WOMEN?										

---

[1] The total from line (6) should be inserted in item (7), line (1), column (H)

6 NUMBER OF **PART-TIME** GRADUATE STUDENTS enrolled for advanced degrees (master's and doctorate) in fall 1989

PART-TIME TOTAL[1]	(1)	
Of the students on line (1), how many are WOMEN?	(2)	

[1] The total from line (1) should be inserted in item (7), line (2), column (H)

7. **RACE/ ETHNICITY** of FULL-TIME (line (1)) and PART-TIME (line (2)) graduate students in fall 1989	Of the student totals in items 5 and 6, how many belong to the following RACIAL/ETHNIC categories? Be sure to count each student only once.		U.S. CITIZENS ONLY						Foreign: permanent residents and temporary visa holders (G)	**TOTAL** (Sum of (A) thru (G)) (H)
			Black non-Hispanic (A)	Amer. Indian/ Alaskan Native (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other, unknown or declined to state (F)		
	FULL TIME, column (H), should equal item 5, line (6), column (K)	(1)								
	PART TIME, column (H), should equal item 6, line (1)	(2)								

8 NUMBER OF **POSTDOCTORATES AND NON-FACULTY RESEARCH STAFF WITH DOCTORATES** in fall 1989		POSTDOCTORATES							OTHER NON-FACULTY RESEARCH STAFF WITH DOCTORATES (G)
		SOURCE OF SUPPORT				**TOTAL for all sources (A) thru (D) (E)**	Of the total in (E), how many are **FOREIGN?** (F)		
		Federal			Non-Federal (D)				
		Fellowships (A)	Traineeships (B)	Research grants (C)					
TOTAL	(1)								
Of the total in each cell of line (1), how many are WOMEN?	(2)								
Of the total in each cell of line (1), how many hold the M.D., D.O., D.D.S., or D.V.M. degree?	(3)								

Approximately how many personhours were required to complete this form? ☐

Explanation of variances from prior year's data or other comments:

List of other Federal sources (agencies) from item 5, column (F), and number of full-time students supported by each:

NOTE: This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. All information you provide will be used for statistical purposes only. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

SURVEY OF GRADUATE SCIENCE AND ENGINEERING STUDENTS AND POSTDOCTORATES

CROSSWALK BETWEEN NSF DISCIPLINE CODES AND THE NCES CLASSIFICATION OF INSTRUCTIONAL PROGRAMS

The following set of discipline codes is used to categorize science and engineering departments in the Survey of Graduate Science and Engineering Students and Postdoctorates. Representative department names are shown under each of the discipline codes.

ENGINEERING

- 101 AEROSPACE ENGINEERING
  - 14 02 AEROSPACE AERONAUTICAL AND ASTRONAUTICAL ENGINEERING
- 102 AGRICULTURAL ENGINEERING
  - 14 03 AGRICULTURAL ENGINEERING
- 103 BIOMEDICAL ENGINEERING
  - 14 05 BIOENGINEERING AND BIOMEDICAL ENGINEERING
- 104 CHEMICAL ENGINEERING
  - 03 0509 WOOD SCIENCE
  - 14 07 CHEMICAL ENGINEERING
- 105 CIVIL ENGINEERING
  - 04 02 ARCHITECTURE
  - 14 04 ARCHITECTURAL ENGINEERING
  - 14 08 CIVIL ENGINEERING
  - 14 14 ENVIRONMENTAL HEALTH ENGINEERING
- 106 ELECTRICAL ENGINEERING
  - 14 09 COMPUTER ENGINEERING
  - 14 10 ELECTRICAL ELECTRONICS AND COMMUNICATIONS ENGINEERING
  - 14 1002 MICROELECTRONIC ENGINEERING
- 107 ENGINEERING SCIENCE
  - 14 12 ENGINEERING PHYSICS
  - 14 13 ENGINEERING SCIENCE
- 108 INDUSTRIAL ENGINEERING/MANAGEMENT SCIENCE
  - 14 17 INDUSTRIAL ENGINEERING
  - 14 27 SYSTEMS ENGINEERING
  - 30 06 SYSTEMS SCIENCE
- 109 MECHANICAL ENGINEERING
  - 14 11 ENGINEERING MECHANICS
  - 14 19 MECHANICAL ENGINEERING
- 110 METALLURGICAL AND MATERIALS ENGINEERING
  - 14 06 CERAMIC ENGINEERING
  - 14 18 MATERIALS ENGINEERING
  - 14 20 METALLURGICAL ENGINEERING
  - 40 0701 METALLURGY
- 111 MINING ENGINEERING
  - 14 15 GEOLOGICAL ENGINEERING
  - 14 16 GEOPHYSICAL ENGINEERING
  - 14 21 MINING AND MINERAL ENGINEERING
- 112 NUCLEAR ENGINEERING
  - 14 23 NUCLEAR ENGINEERING
- 113 PETROLEUM ENGINEERING
  - 14.25 PETROLEUM ENGINEERING
- 114 ENGINEERING, N E C
  - 14 01 ENGINEERING, GENERAL
  - 14.22 NAVAL ARCHITECTURE AND MARINE ENGINEERING
  - 14 24 OCEAN ENGINEERING
  - 14 28 TEXTILE ENGINEERING
  - 14 99 ENGINEERING, OTHER
  - 19 09 TEXTILES AND CLOTHING (EXCLUDING 19 0902 FASHION DESIGN)
  - 30 03 ENGINEERING AND OTHER DISCIPLINES

PHYSICAL SCIENCES

- 201 ASTRONOMY
  - 40 02 ASTRONOMY
  - 40 03 ASTROPHYSICS
  - 40 09 PLANETARY SCIENCE
- 202 CHEMISTRY
  - 40 05 CHEMISTRY
- 203 PHYSICS
  - 40 08 PHYSICS
- 204 PHYSICAL SCIENCES N E C
  - 40 01 PHYSICAL SCIENCES, GENERAL
  - 40 0799 MISCELLANEOUS PHYSICAL SCIENCES, OTHER
  - 40 99 PHYSICAL SCIENCES, OTHER

ENVIRONMENTAL SCIENCES

- 301 ATMOSPHERIC SCIENCES
  - 40 04 ATMOSPHERIC SCIENCES AND METEOROLOGY
- 302 GEOSCIENCES
  - 14 26 SURVEYING AND MAPPING SCIENCES
  - 40 06 GEOLOGICAL SCIENCES
  - 40 0703 EARTH SCIENCE
- 303 OCEANOGRAPHY
  - 26 0607 MARINE BIOLOGY
  - 40 0702 OCEANOGRAPHY
- 304 ENVIRONMENTAL SCIENCES, N E C

MATHEMATICAL SCIENCES

- 402 MATHEMATICS AND APPLIED MATHEMATICS
  - 06 1302 OPERATIONS RESEARCH (QUANTITATIVE METHODS)
  - 27 01 MATHEMATICS, GENERAL
  - 27 03 APPLIED MATHEMATICS
  - 27 04 PURE MATHEMATICS
  - 27 99 MATHEMATICS, OTHER
  - 30 08 MATHEMATICS AND COMPUTER SCIENCE
- 403 STATISTICS
  - 27 02 ACTUARIAL SCIENCES
  - 27 05 STATISTICS

COMPUTER SCIENCES

- 401 COMPUTER SCIENCE
  - 06 12 MANAGEMENT INFORMATION SYSTEMS
  - 11 COMPUTER AND INFORMATION SCIENCES, GENERAL
  - 30 09 IMAGING SCIENCE

LIFE SCIENCES

AGRICULTURAL SCIENCES (SEE ALSO 102 AND 901)

- 501 **AGRICULTURAL SCIENCES**
  - 02 01 AGRICULTURAL SCIENCES, GENERAL
  - 02 02 ANIMAL SCIENCES
  - 02 03 FOOD SCIENCES
  - 02 04 PLANT SCIENCES
  - 02 05 SOIL SCIENCES
  - 02 99 AGRICULTURAL SCIENCES, OTHER
  - 03 01 RENEWABLE NATURAL RESOUIRCES, GENERAL
  - 03 02 CONSERVATION AND REGULATION
  - 03 03 FISHING AND FISHERIES
  - 03 05 FORESTRY AND RELATED SCIENCES
  - 03 06 WILDLIFE MANAGEMENT
  - 03 99 RENEWABLE NATURAL RESOURCES, OTHER
  - 31 04 WATER RESOURCES

BIOLOGICAL SCIENCES

- 601 ANATOMY
  - 18 0201 CLINICAL ANATOMY
  - 26 0601 ANATOMY
- 602 BIOCHEMISTRY
  - 18 0202 CLINICAL BIOCHEMISTRY
  - 26 02 BIOCHEMISTRY AND BIOPHYSICS
- 603 BIOLOGY
  - 26 01 BIOLOGY, GENERAL
  - 26 0604 EMBRYOLOGY
- 604 BIOMETRY AND EPIDEMIOLOGY
  - 18 2202 EPIDEMIOLOGY
  - 26 0602 BIOMETRICS AND BIOSTATISTICS
- 605 BIOPHYSICS
- 606 BOTANY
  - 26 03 BOTANY (EXCLUDING 26 0302 BACTERIOLOGY—SEE 611)
- 607 CELL BIOLOGY
  - 26 04 CELL AND MOLECULAR BIOLOGY
  - 26 0606 HISTOLOGY

- 608 ECOLOGY
  - 26.0603 ECOLOGY
- 609 ENTOMOLOGY AND PARASITOLOGY
  - 26.0610 PARASITOLOGY
  - 26.0702 ENTOMOLOGY
- 610 GENETICS
  - 26.0703 GENETICS, HUMAN AND ANIMAL
- 611 MICROBIOLOGY, IMMUNOLOGY, AND VIROLOGY
  - 18.0203 CLINICAL MICROBIOLOGY
  - 18.1002 ALLERGIES AND ENDOMOLOGY
  - 18.1009 IMMUNOLOGY
  - 26.0302 BACTERIOLOGY
  - 26.05 MICROBIOLOGY
- 612 NUTRITION
  - 19.05 FOOD SCIENCES AND HUMAN NUTRITION
  - 20.0108 FOOD AND NUTRITION
  - 26.0609 NUTRITIONAL SCIENCES
- 613 PATHOLOGY
  - 18.0204 CLINICAL PATHOLOGY
  - 18.1018 PATHOLOGY
  - 26.0704 PATHOLOGY, HUMAN AND ANIMAL
- 614 PHARMACOLOGY
  - 18.0205 CLINICAL TOXICOLOGY
  - 26.0612 TOXICOLOGY
  - 26.0705 PHARMACOLOGY, HUMAN AND ANIMAL
  - 42.14 PSYCHOPHARMACOLOGY
- 615 PHYSIOLOGY
  - 18.0205 PHYSIOLOGY
  - 26.0706 PHYSIOLOGY, HUMAN AND ANIMAL
- 616 ZOOLOGY
  - 26.0701 ZOOLOGY
  - 26.0799 ZOOLOGY, OTHER
- 617 BIOSCIENCES, N.E.C.
  - 26.0699 MISCELLANEOUS SPECIALIZED AREAS, LIFE SCIENCES, OTHER
  - 26.99 LIFE SCIENCES, OTHER

HEALTH SCIENCES (SEE ALSO 103)

- 701 ANESTHESIOLOGY
  - 18.1003 ANESTHESIOLOGY
- 702 CARDIOLOGY
- 703 CANCER RESEARCH/ONCOLOGY
- 704 ENDOCRINOLOGY
  - 26.0805 ENDOCRINOLOGY
- 705 GASTROENTEROLOGY
- 706 HEMATOLOGY
  - 18.08 HEMATOLOGY
- 707 NEUROLOGY
  - 18.1024 NEUROLOGY
  - 26.0608 NEUROSCIENCES
- 708 OBSTETRICS AND GYNECOLOGY
  - 18.1013 OBSTETRICS AND GYNECOLOGY
- 709 OPHTHALMOLOGY
  - 18.1014 OPHTHALMOLOGY
  - 18.12 OPTOMETRY
- 710 OTORHINOLARYNGOLOGY
  - 18.1017 OTORHINOLARYNGOLOGY/OTOLARYNGOLOGY
- 711 PEDIATRICS
  - 18.1019 PEDIATRICS
  - 20.0102 CHILD DEVELOPMENT, CARE, AND GUIDANCE
- 712 PREVENTIVE MEDICINE AND COMMUNITY HEALTH
  - 18.1007 FAMILY PRACTICE
  - 18.1022 PREVENTIVE MEDICINE
- 713 PSYCHIATRY
  - 18.1023 PSYCHIATRY
  - 18.1106 PSYCHIATRY/MENTAL HEALTH
- 714 PULMONARY DISEASE
- 715 RADIOLOGY
  - 18.1012 NUCLEAR MEDICINE
  - 18.1025 RADIOLOGY
  - 26.0611 RADIOBIOLOGY
- 716 SURGERY
  - 18.1004 COLON AND RECTAL SURGERY
  - 18.1011 NEUROLOGICAL SURGERY
  - 18.1016 ORTHOPEDIC
  - 18.1021 PLASTIC SURGERY
  - 18.1026 SURGERY
  - 18.1027 THORACIC SURGERY
- 717 CLINICAL MEDICINE, N.E.C.
  - 18.0299 BASIC CLINICAL HEALTH SCIENCES, OTHER
  - 18.1001 MEDICINE, GENERAL
  - 18.1005 DERMATOLOGY
  - 18.1008 GERIATRICS
  - 18.1010 INTERNAL MEDICINE
  - 18.1020 PHYSICAL MEDICINE AND REHABILITATION
  - 18.1028 UROLOGY
  - 18.1099 MEDICINE, OTHER
  - 18.13 OSTEOPATHIC MEDICINE
  - 18.15 PODIATRY
  - 30.01 BIOLOGICAL AND PHYSICAL SCIENCES
- 718 DENTAL SCIENCES
  - 18.04 DENTISTRY
  - 18.1015 ORTHODONTIC SURGERY
- 719 NURSING
  - 18.11 NURSING (EXCLUDING 18.1106, PSYCHIATRY/MENTAL HEALTH—SEE 713)
- 720 PHARMACEUTICAL SCIENCES
  - 18.14 PHARMACY
- 721 VETERINARY SCIENCES
  - 18.24 VETERINARY MEDICINE
- 722 HEALTH RELATED, N.E.C.
  - 17.0807 OCCUPATIONAL THERAPY
  - 17.0813 PHYSICAL THERAPY
  - 17.0899 REHABILITATION SERVICES, OTHER
  - 17.99 ALLIED HEALTH, OTHER
  - 18.07 HEALTH SCIENCES ADMINISTRATION
  - 18.09 MEDICAL LABORATORY
  - 18.22 PUBLIC HEALTH
  - 18.99 HEALTH SCIENCES, OTHER
- 723 SPEECH PATHOLOGY AND AUDIOLOGY
  - 18.01 AUDIOLOGY AND SPEECH PATHOLOGY

PSYCHOLOGY

- 802 PSYCHOLOGY, EXCEPT CLINICAL
- 803 CLINICAL PSYCHOLOGY
- 804 PSYCHOLOGY, COMBINED
  - 13.08 SCHOOL PSYCHOLOGY
  - 17.0801 ART THERAPY
  - 42 PSYCHOLOGY

SOCIAL SCIENCES

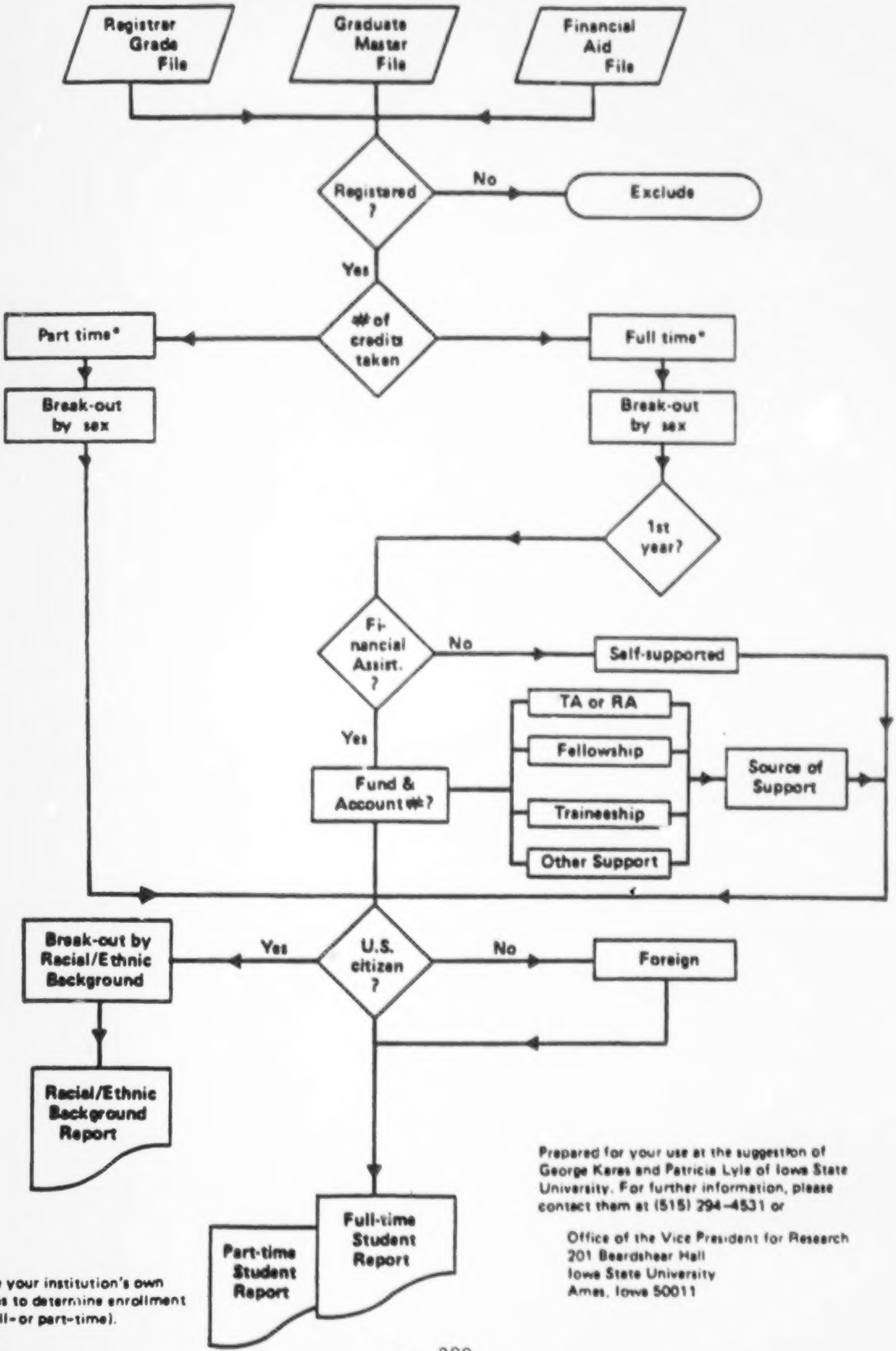
- 901 AGRICULTURAL ECONOMICS
  - 01.0102 AGRICULTURAL BUSINESS AND MANAGEMENT
  - 01.0103 AGRICULTURAL ECONOMICS
- 902 ANTHROPOLOGY (CULTURAL AND SOCIAL)
  - 45.02 ANTHROPOLOGY
  - 45.03 ARCHEOLOGY
- 903 ECONOMICS (EXCEPT AGRICULTURAL)
  - 06.05 BUSINESS ECONOMICS
  - 45.06 ECONOMICS
- 904 GEOGRAPHY
  - 45.07 GEOGRAPHY
- 905 HISTORY AND PHILOSOPHY OF SCIENCE
- 906 LINGUISTICS
  - 23.08 LINGUISTICS
  - 42.12 PSYCHOLINGUISTICS
- 907 POLITICAL SCIENCE
  - 44.01 PUBLIC AFFAIRS, GENERAL
  - 44.03 INTERNATIONAL PUBLIC SERVICE
  - 44.04 PUBLIC ADMINISTRATION
  - 44.05 PUBLIC POLICY STUDIES
  - 44.99 PUBLIC AFFAIRS, OTHER
  - 45.09 INTERNATIONAL RELATIONS
  - 45.10 POLITICAL SCIENCE AND GOVERNMENT
- 908 SOCIOLOGY
  - 45.05 DEMOGRAPHY
  - 45.11 SOCIOLOGY
- 909 SOCIOLOGY AND ANTHROPOLOGY
- 910 SOCIAL SCIENCES, N.E.C.
  - 04.03 CITY, COMMUNITY AND REGIONAL PLANNING
  - 05 AREA AND ETHNIC STUDIES
  - 06.08 HUMAN RESOURCES DEVELOPMENT
  - 06.15 ORGANIZATIONAL BEHAVIOR
  - 31.03 PARKS AND RECREATION MANAGEMENT
  - 43.01 CRIMINAL JUSTICE
  - 44.02 COMMUNITY SERVICES
  - 44.07 SOCIAL WORK
  - 45.01 SOCIAL SCIENCES, GENERAL
  - 45.04 CRIMINOLOGY
  - 45.12 URBAN STUDIES
  - 45.99 SOCIAL SCIENCES, OTHER

BEST COPY AVAILABLE

FLOW CHART

NSF SURVEY OF GRADUATE SCIENCE AND ENGINEERING STUDENTS AND POSTDOCTORATES

Institutions that automate NSF survey data, or plan to--or even engage in manual data processing--may be assisted in tabulating enrollment data (items 5-7 on form 812) by this chart.



Registrar Grade File
Graduate Master File
Financial Aid File
Registered ?
No
Exclude
Yes
# of credits taken
Part time*
Full time*
Break-out by sex
Break-out by sex
1st year?
Financial Assist. ?
No
Self-supported
Yes
Fund & Account #?
TA or RA
Fellowship
Traineeship
Other Support
Source of Support
Break-out by Racial/Ethnic Background
Yes
U.S. citizen ?
No
Foreign
Racial/Ethnic Background Report
Full-time Student Report
Part-time Student Report

Prepared for your use at the suggestion of George Karas and Patricia Lyle of Iowa State University. For further information, please contact them at (515) 294-4531 or

Office of the Vice President for Research
201 Beardshear Hall
Iowa State University
Ames, Iowa 50011

*Please use your institution's own definitions to determine enrollment status (full- or part-time).

NSF Form 812A (6-83)

Table IV-A-1. Summary of responses from all departments
at all graduate institutions: Fall 1989

Number of departments: 10318

5. FULL-TIME GRADUATE S/E STUDENTS	Students Receiving Financial Assistance										
	Federal Sources (excluding loans)						Non-Federal Sources			Self support (includ. loans & family sources) (J)	Total for all sources (sum of columns A - J) (K)
		HHS									
	DOD (A)	NIH (B)	Other HHS (C)	NSF (D)	Dept. of Agr. (E)	Other Federal sources (F)	Institutional support (G)	Foreign sources (H)	Other U.S. sources (I)		
Graduate Fellowships (1)	521	730	232	1785	102	2023	12996	2363	3709		24461
Graduate Traineeships (2)	118	4088	3031	89	48	1400	4718	277	671		14440
Graduate Research Assistants (3)	5810	9238	903	9858	2410	10095	29135	673	11029		79151
Graduate Teaching Assistants (4)		143	15	68	33	266	63492		556		64573
Other Types of Support (5)	2879	295	97	95	91	1458	9729	3133	3342	82875	103994
FULL-TIME TOTAL (6)	9328	14494	4278	11895	2684	15242	120070	6446	19307	82875	286619
Full-time Women (7)	1384	6050	3208	2545	870	4450	42018	1192	5113	35100	101930
Full-time First-year Total (8)											86222
Full-time First-year Women (9)											33847

6. PART-TIME GRADUATE S/E STUDENTS	
Total (1)	154364
Women (2)	66880

7. RACIAL/ETHNIC BACKGROUND OF GRADUATE S/E STUDENTS	U.S. Citizens Only							
	Black non-Hispanic (A)	American Indian/ Alaskan (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other or unknown (F)	Foreign (G)	Total (sum of columns A - G) (H)
Full-time (1)	7698	670	11085	7136	164077	9362	86591	286619
Part-time (2)	6451	409	6433	4369	110288	11190	15224	154364

8. S/E POSTDOCTORATES AND NON-FACULTY DOCTORAL RESEARCH STAFF	Postdoctorates						
	Source of Support						
	Federal						
	Fellowships (A)	Traineeships (B)	Research grants (C)	Non-Federal (D)	Total for all sources (A - D) (E)	Foreign postdoctorates (F)	Other non-fac. doctoral research staff (G)
Total (1)	2701	2550	14467	8494	28212	13137	4947
Women (2)	868	909	3501	2209	7487	2984	1288
With MD, DDS, or DVM degrees (3)	705	1119	1391	2305	5520	2427	461

SOURCE: National Science Foundation, SRS

Table IV-B-1. Summary of responses from all departments
at doctorate-granting institutions: Fall 1989

Number of departments: 8839

5. FULL-TIME GRADUATE S/E STUDENTS	Students Receiving Financial Assistance										
	Federal Sources (excluding loans)						Non-Federal Sources				
		HHS									
	DOD (A)	NIH (B)	Other HHS (C)	NSF (D)	Dept. of Agr. (E)	Other Federal sources (F)	Instit-utional support (G)	Foreign sources (H)	Other U.S. sources (I)	Self support (includ. loans & family sources) (J)	Total for all sources (sum of columns A - J) (K)
Graduate Fellowships (1)	517	723	218	1777	102	1901	12639	2322	3616		23815
Graduate Traineeships (2)	118	4074	2808	89	45	1349	4585	273	653		13994
Graduate Research Assistants (3)	5752	9160	900	9808	2364	9906	27924	654	10957		77425
Graduate Teaching Assistants (4)		139	15	63	33	236	61206		506		62198
Other Types of Support (5)	2861	295	97	92	89	1181	8837	2943	3173	70554	90122
FULL-TIME TOTAL (6)	9248	14391	4038	11829	2633	14573	115191	6192	18905	70554	267554
Full-time Women (7)	1371	6002	3001	2521	859	4213	39671	1148	4959	28798	92543
Full-time First-year Total (8)											79034
Full-time First-year Women (9)											30119

6. PART-TIME GRADUATE S/E STUDENTS	
Total (1)	117471
Women (2)	48957

7. RACIAL/ETHNIC BACKGROUND OF GRADUATE S/E STUDENTS	U.S. Citizens Only							
	Black non-Hispanic (A)	American Indian/ Alaskan (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other or unknown (F)	Foreign (G)	Total (sum of columns A - G) (H)
Full-time (1)	6423	611	10234	6642	152309	7947	83388	267554
Part-time (2)	4244	305	4575	3248	84366	7795	12938	117471

8. S/E POSTDOCTORATES AND NON-FACULTY DOCTORAL RESEARCH STAFF	Postdoctorates						
	Source of Support						
	Federal						
	Fellow-ships (A)	Trainee-ships (B)	Research grants (C)	Non-Federal (D)	Total for all sources (A - D) (E)	Foreign postdoc-torates (F)	Other non-fac. doctoral research staff (G)
Total (1)	2699	2550	14439	8469	28157	13113	4929
Women (2)	868	909	3495	2207	7479	2979	1285
With MD, DDS, or DVM degrees (3)	705	1119	1391	2305	5520	2427	461

SOURCE: National Science Foundation, SRS

Table IV-C-1. Summary of responses from all departments at master's-granting institutions: Fall 1989

Number of departments: 1479

5. FULL-TIME GRADUTAE S/E STUDENTS	Students Receiving Financial Assistance									Self support (includ. loans & family sources) (J)	Total for all sources (sum of columns A - J) (K)
	Federal Sources (excluding loans)						Non-Federal Sources				
		HHS									
	DOD (A)	NIH (B)	Other HHS (C)	NSF (D)	Dept. of Agr. (E)	Other Federal sources (F)	Instit-utional support (G)	Foreign sources (H)	Other U.S. sources (I)		
Graduate Fellowships (1)	4	7	14	8	0	122	357	41	93		646
Graduate Traineeships (2)	0	14	223	0	3	51	133	4	18		446
Graduate Research Assistants (3)	58	78	3	50	46	189	1211	19	72		1726
Graduate Teaching Assistants (4)		4	0	5	0	30	2286		50		2375
Other Types of Support (5)	18	0	0	3	2	277	892	190	169	12321	13872
FULL-TIME TOTAL (6)	80	103	240	66	51	669	4879	254	402	12321	19065
Full-time Women (7)	13	48	207	24	11	237	2347	44	154	6302	9387
Full-time First-year Total (8)											7188
Full-time First-year Women (9)											3728

6. PART-TIME GRADUATE S/E STUDENTS	
Total (1)	36893
Women (2)	17923

7. RACIAL/ETHNIC BACKGROUND OF GRADUATE S/E STUDENTS	U.S. Citizens Only						Foreign (G)	Total (sum of columns A - G) (H)
	Black non-Hispanic (A)	American Indian/ Alaskan (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other or unknown (F)		
Full-time (1)	1275	59	851	494	11768	1415	3203	19065
Part-time (2)	2207	104	1858	1121	25922	3395	2286	36893

8. S/E POSTDOCTORATES AND NON-FACULTY DOCTORAL RESEARCH STAFF	Postdoctorates							Other non-fac. doctoral research staff (G)
	Source of Support				Total for all sources (A - D) (E)	Foreign postdoctorates (F)		
	Federal			Non-Federal (D)				
	Fellowships (A)	Traineeships (B)	Research grants (C)					
Total (1)	2	0	28	25	55	24		18
Women (2)	0	0	6	2	8	5		3
With MD, DDS, or DVM degrees (3)	0	0	0	0	0	0		0

SOURCE: National Science Foundation, SRS

Table IV-D-1. Summary of responses from all departments at all public institutions: Fall 1989

Number of departments: 7163

5. FULL-TIME GRADUATE S/E STUDENTS	Students Receiving Financial Assistance									Self support (includ. loans & family sources) (J)	Total for all sources (sum of columns A - J) (K)
	Federal Sources (excluding loans)						Non-Federal Sources				
		HHS									
	DOD (A)	NIH (B)	Other HHS (C)	NSF (D)	Dept. of Agr. (E)	Other Federal sources (F)	Institutional support (G)	Foreign sources (H)	Other U.S. sources (I)		
Graduate Fellowships (1)	195	356	171	753	91	1321	7282	1181	2146		13496
Graduate Traineeships (2)	64	1980	2420	44	29	1022	1920	128	379		7986
Graduate Research Assistants (3)	3861	6499	713	6813	2323	7673	24341	511	8043		60777
Graduate Teaching Assistants (4)		126	8	51	33	207	51327		384		52136
Other Types of Support (5)	2459	166	46	81	71	1062	6276	2136	2197	56853	71347
FULL-TIME TOTAL (6)	6579	9127	3358	7742	2547	11285	91146	3956	13149	56853	205742
Full-time Women (7)	961	3820	2576	1661	804	3323	31255	719	3566	23203	71888
Full-time First-year Total (8)											61407
Full-time First-year Women (9)											23547

6. PART-TIME GRADUATE S/E STUDENTS	
Total (1)	101361
Women (2)	44585

7. RACIAL/ETHNIC BACKGROUND OF GRADUATE S/E STUDENTS	U.S. Citizens Only						Foreign (G)	Total (sum of columns A - G) (H)
	Black non-Hispanic (A)	American Indian/ Alaskan (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other or unknown (F)		
Full-time (1)	5582	515	7600	5378	118893	5635	62139	205742
Part-time (2)	4297	293	4131	3133	73809	4885	10813	101361

8. S/E POSTDOCTORATES AND NON-FACULTY DOCTORAL RESEARCH STAFF	Postdoctorates						Other non-fac. doctoral research staff (G)
	Source of Support				Total for all sources (A - D) (E)	Foreign postdoctorates (F)	
	Federal			Non-Federal (D)			
	Fellowships (A)	Traineeships (B)	Research grants (C)				
Total (1)	1389	1259	9049	4501	16198	7480	2898
Women (2)	441	458	2196	1172	4267	1620	735
With MD, DDS, or DVM degrees (3)	321	451	637	910	2319	964	201

SOURCE: National Science Foundation, SRS

Table IV-D-2. Summary of responses from all departments
at all private institutions: Fall 1989

Number of departments: 3155

5. FULL-TIME GRADUATE S/E STUDENTS	Students Receiving Financial Assistance										
	Federal Sources (excluding loans)						Non-Federal Sources			Self support (includ. loans & family sources) (J)	Total for all sources (sum of columns A - J) (K)
		HHS									
	DOD (A)	NIH (B)	Other HHS (C)	NSF (D)	Dept. of Agr. (E)	Other Federal sources (F)	Institutional support (G)	Foreign sources (H)	Other U.S. sources (I)		
Graduate Fellowships (1)	326	374	61	1032	11	702	5714	1182	1563		10965
Graduate Traineeships (2)	54	2108	611	45	19	378	2798	149	292		6454
Graduate Research Assistants (3)	1949	2739	190	3045	87	2422	4794	162	2986		18374
Graduate Teaching Assistants (4)		17	7	17	0	59	12165		172		12437
Other Types of Support (5)	420	129	51	14	20	396	3453	997	1145	26022	32647
FULL-TIME TOTAL (6)	2749	5367	920	4153	137	3957	28924	2490	6158	26022	80877
Full-time Women (7)	423	2230	632	884	66	1127	10763	473	1547	11897	30042
Full-time First-year Total (8)											24815
Full-time First-year Women (9)											10300

6. PART-TIME GRADUATE S/E STUDENTS	
Total (1)	53003
Women (2)	22295

7. RACIAL/ETHNIC BACKGROUND OF GRADUATE S/E STUDENTS	U.S. Citizens Only							
	Black non-Hispanic (A)	American Indian/ Alaskan (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other or unknown (F)	Foreign (G)	Total (sum of columns A - G) (H)
Full-time (1)	2116	155	3485	1758	45184	3727	24452	80877
Part-time (2)	2154	116	2302	1236	36479	6305	4411	53003

8. S/E POSTDOCTORATES AND NON-FACULTY DOCTORAL RESEARCH STAFF	Postdoctorates							
	Source of Support							
	Federal							
	Fellowships (A)	Traineeships (B)	Research grants (C)	Non-Federal (D)	Total for all sources (A - D) (E)	Foreign postdoctorates (F)		Other non-fac. doctoral research staff (G)
Total (1)	1312	1291	5418	3993	12014	5657		2049
Women (2)	427	451	1305	1037	3220	1364		553
With MD, DDS, or DVM degrees (3)	384	668	754	1395	3201	1463		260

SOURCE: National Science Foundation, SRS

Table IV-D-3. Summary of responses from all departments at all historically black institutions: Fall 1989

Number of departments: 164

5. FULL-TIME GRADUATE S/E STUDENTS	Students Receiving Financial Assistance										
	Federal Sources (excluding loans)						Non-Federal Sources			Self support (includ. loans & family sources) (J)	Total for all sources (sum of columns A - J) (K)
		HHS									
	DOD (A)	NIH (B)	Other HHS (C)	NSF (D)	Dept. of Agr. (E)	Other Federal sources (F)	Institutional support (G)	Foreign sources (H)	Other U.S. sources (I)		
Graduate Fellowships (1)	4	1	10	7	0	70	90	10	74		266
Graduate Traineeships (2)	0	30	20	0	0	5	74	0	0		129
Graduate Research Assistants (3)	58	104	0	35	46	101	94	5	15		458
Graduate Teaching Assistants (4)		3	0	4	0	19	256		46		328
Other Types of Support (5)	13	9	0	1	1	20	111	26	44	685	910
FULL-TIME TOTAL (6)	75	147	30	47	47	215	625	41	179	685	2091
Full-time Women (7)	27	64	25	19	10	67	256	6	53	271	798
Full-time First-year Total (8)											689
Full-time First-year Women (9)											297

6. PART-TIME GRADUATE S/E STUDENTS	
Total (1)	1338
Women (2)	623

7. RACIAL/ETHNIC BACKGROUND OF GRADUATE S/E STUDENTS	U.S. Citizens Only							
	Black non-Hispanic (A)	American Indian/ Alaskan (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other or unknown (F)	Foreign (G)	Total (sum of columns A - G) (H)
Full-time (1)	1049	2	107	22	175	54	682	2091
Part-time (2)	625	3	44	10	312	50	294	1338

8. S/E POSTDOCTORATES AND NON-FACULTY DOCTORAL RESEARCH STAFF	Postdoctorates						
	Source of Support						
	Federal						
	Fellowships (A)	Traineeships (B)	Research grants (C)	Non-Federal (D)	Total for all sources (A - D) (E)	Foreign postdoctorates (F)	Other non-fac. doctoral research staff (G)
Total (1)	1	0	36	10	47	36	9
Women (2)	0	0	8	3	11	8	1
With MD, DDS, or DVM degrees (3)	0	0	2	3	5	4	0

SOURCE: National Science Foundation, SRS

Table IV-D-4. Summary of responses from all departments
at all medical schools: Fall 1989

Number of departments: 2836

5. FULL-TIME GRADUATE S/E STUDENTS

	Students Receiving Financial Assistance										
	Federal Sources (excluding loans)						Non-Federal Sources			Self support (includ. loans & family sources)	Total for all sources (sum of columns A - J)
		HHS									
	DOD (A)	NIH (B)	Other HHS (C)	NSF (D)	Dept. of Agr. (E)	Other Federal sources (F)	Institutional support (G)	Foreign sources (H)	Other U.S. sources (I)	(J)	(K)
Graduate Fellowships (1)	30	384	77	119	0	67	1475	81	324		2557
Graduate Traineeships (2)	23	1682	794	40	2	302	938	21	91		3893
Graduate Research Assistants (3)	88	2853	145	89	20	97	2157	47	497		5993
Graduate Teaching Assistants (4)		50	2	4	0	8	1180		26		1270
Other Types of Support (5)	88	162	56	5	1	229	664	200	193	3680	5278
FULL-TIME TOTAL (6)	229	5131	1074	257	23	703	6414	349	1131	3680	18991
Full-time Women (7)	86	2156	864	149	12	440	3005	112	479	2344	9647
Full-time First-year Total (8)											5807
Full-time First-year Women (9)											3314

6. PART-TIME GRADUATE S/E STUDENTS

Total (1)	5922
Women (2)	4262

7. RACIAL/ETHNIC BACKGROUND OF GRADUATE S/E STUDENTS

	U.S. Citizens Only							
	Black non-Hispanic (A)	American Indian/ Alaskan (B)	Asian/ Pacific Islander (C)	Hispanic (D)	White non-Hispanic (E)	Other or unknown (F)	Foreign (G)	Total (sum of columns A - G) (H)
Full-time (1)	518	48	1010	757	12449	436	3773	18991
Part-time (2)	229	35	107	373	4463	496	219	5922

8. S/E POSTDOCTORATES AND NON-FACULTY DOCTORAL RESEARCH STAFF

	Postdoctorates						
	Source of Support						
	Federal						
	Fellowships (A)	Traineeships (B)	Research grants (C)	Non-Federal (D)	Total for all sources (A - D) (E)	Foreign postdoctorates (F)	Other non-fac. doctoral research staff (G)
Total (1)	1486	2062	5148	4398	13094	5666	1441
Women (2)	489	710	1637	1276	4112	1603	477
With MD, DDS, or DVM degrees (3)	652	1065	1163	2117	4997	2154	336

SOURCE: National Science Foundation, SRS

SPECIALIZED PAMPHLETS AVAILABLE

In response to the particular interests expressed by many users of data from the Survey of Graduate Students and Postdoctorates in Science and Engineering, a number of pamphlets have been prepared which concentrate on various aspects of the survey results. If you would like to receive additional pamphlets, please check the appropriate boxes below and return this page with your name and address to the NSF survey monitor:

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☐ 1. Trends in graduate S/E enrollment, 1975-89
☐ 2. Enrollment status (full-time/part-time)
☐ 3. Source of major support
☐ 4. Mechanism of support
☐ 5. Sex
☐ 6. Citizenship
☐ 7. Racial/ethnic background
☐ 8. Institutional highest degree granted
☐ 9. Type of institutional control
☐ 10. Geographic distribution
☐ 11. Individual institution listings
☐ 12. Postdoctorates and other nonfaculty research personnel (Doctorate-granting institutions only)
☐ 13. Historically Black Colleges and Universities
☐ 14. Land Grant Institutions